625.13
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Pt.2

NEW YORK STATE BRIDGE AND TUNNEL COMMISSION

AND

NEW JERSEY INTERSTATE BRIDGE AND TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

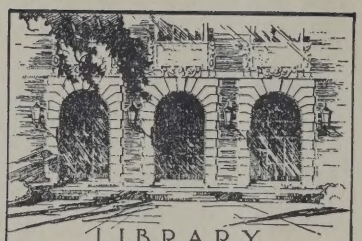
CONTRACT No. 5

TUNNELS BETWEEN THE CANAL STREET SHAFT AND THE EAST SIDE OF HUDSON STREET AND BETWEEN THE SPRING STREET SHAFT AND THE NORTH SIDE OF DOMINICK STREET

NEW YORK

CONTRACT DRAWINGS 1 to 33

1923



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AND

NEW JERSEY INTERSTATE BRIDGE AND TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5

TUNNELS BETWEEN THE CANAL STREET SHAFT AND THE EAST SIDE OF HUDSON STREET AND BETWEEN THE SPRING STREET SHAFT AND THE NORTH SIDE OF DOMINICK STREET

NEW YORK

CONTRACT DRAWINGS 1 to 33

1923

625.13
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TALMADGE

NEW YORK STATE BRIDGE AND TUNNEL COMMISSION

AND

NEW JERSEY INTERSTATE BRIDGE AND TUNNEL COMMISSION

NEW YORK STATE BRIDGE AND TUNNEL COMMISSION

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Emerson Richards, Counsel

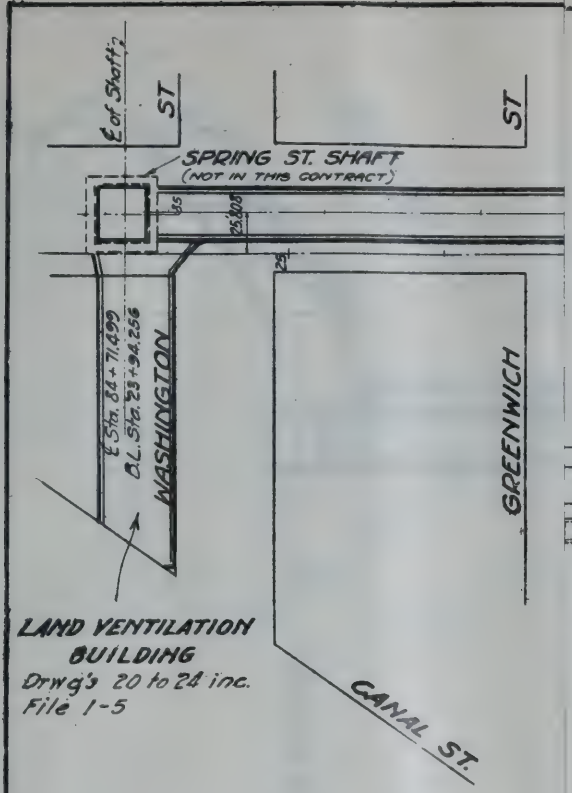
James P. Dolan, Secretary

Clifford M. Holland
Chief Engineer

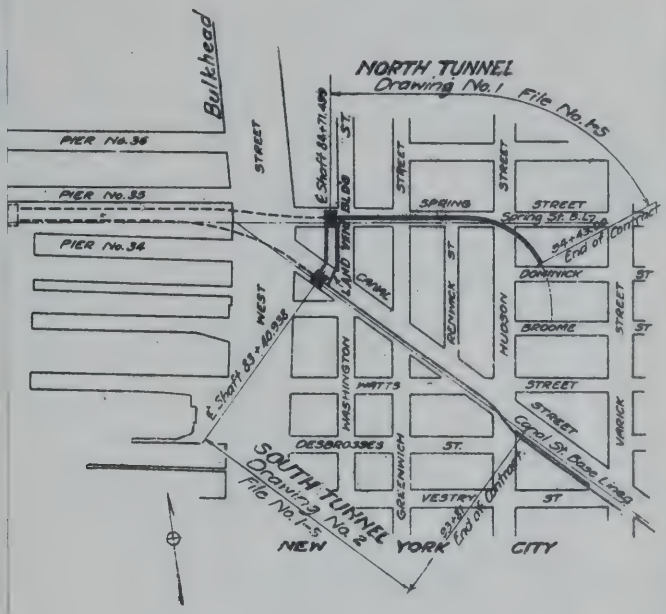
LIST OF CONTRACT DRAWINGS

Contract No. 5

1. North Tunnel, New York—Plan and Profile.
2. South Tunnel, New York—Plan and Profile.
3. North Tunnel, New York—Plan and Longitudinal Section.
4. North Tunnel, New York—Plan and Longitudinal Sections RR and SS.
5. North Tunnel, New York—Plan and Longitudinal Sections TT and UU.
6. South Tunnel, New York—Plan and Longitudinal Section.
7. South Tunnel, New York—Plan and Longitudinal Section.
8. South Tunnel, New York—Plan and Longitudinal Section.
9. North and South Tunnels, New York—Sections AA, DD and FF.
10. South Tunnel, New York—Section BB and CC.
11. South Tunnel, New York—Section EE.
12. North Tunnel, New York—Sections GG and HH.
13. North Tunnel, New York—Section II and Details of 6″ Water-pipe System.
14. North and South Tunnels, New York—Interior Details.
15. North and South Tunnels, New York—Concrete Details—Sections with Air Ducts on Top, Side and Bottom.
16. North and South Tunnels, New York—Concrete Details.
17. North and South Tunnels, New York—High Tension Duct Splicing Chamber.
18. North and South Tunnels, New York—Tunnel Manholes.
19. Girder and Column Schedules.
20. Land Ventilation Building, New York—Street Floor Plan and Basement Floor Plan.
21. Land Ventilation Building, New York—Sections AA, BB, CC and HH.
22. Land Ventilation Building, New York—Sections DD and EE.
23. Land Ventilation Building, New York—Sections FF, GG and II.
24. Land Ventilation Building, New York—Air Ducts.
25. Canal Street and Spring Street Shafts—Shaft Details.
26. Plan and Profiles of Sewer Construction.
27. Sewer Details.
28. Cast-iron Sewer Details.
29. Electrical Conduit System—Elevations.
30. Electrical Conduit System—Sections.
31. Electrical Conduit System—Canal Street and Spring Street Shafts.
32. Details of Air Measurement Apparatus.
33. Area Available for Contractor's Use.

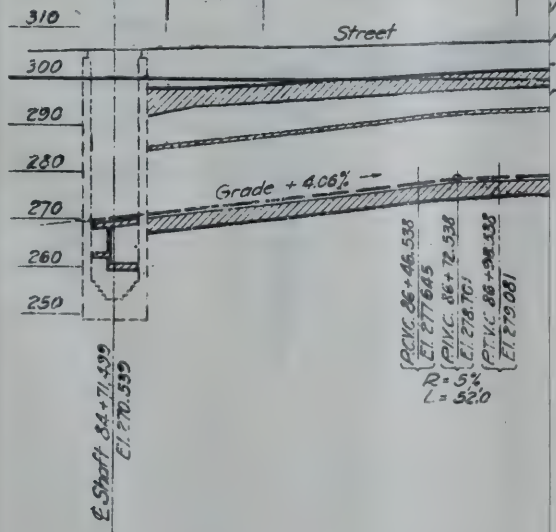


Profile shows grades and elevations of roadway at center line of roadway.



KEY PLAN

SCALE: 0 800 400 FEET



r Plan & Profile of South Tunnel	see Drwg No. 2		File 1-5
r Structural Plans	" Drwgs. Nos. 3 - 24 incl.		" 1-5
r Sewer const'n. Plan & Details	" " " 26-28 incl.		" 1-5
r Electrical Conduit Systems	" " " 29-31 incl.		" 1-5
r Area available for Contr's use	see Drwg. No 33		" 1-5
r Air measurement apparatus	" " " 32		" 1-5
r Details in shafts	" " " 25		" 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 1

SCALE: AS SHOWN

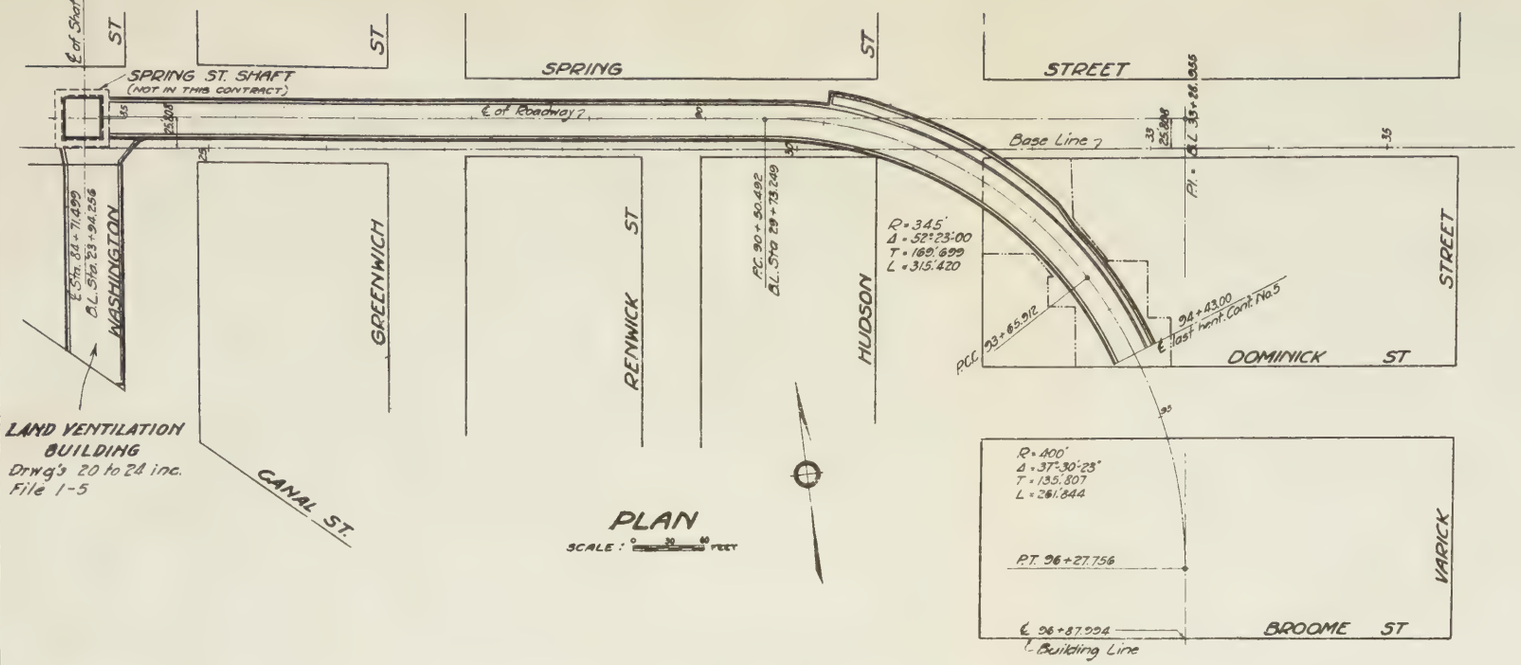
DATE: APRIL 25, 1928

Ole Singstad
ENGINEER OF DESIGNS

C.H. Holland
CHIEF ENGINEER

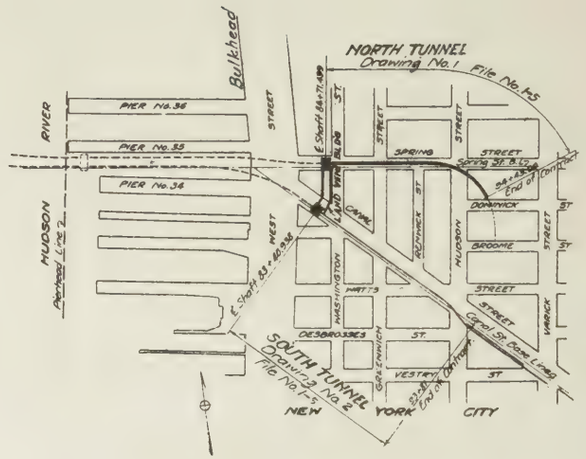
DRAWN BY
CHECKED BY

FILE No. 1-5

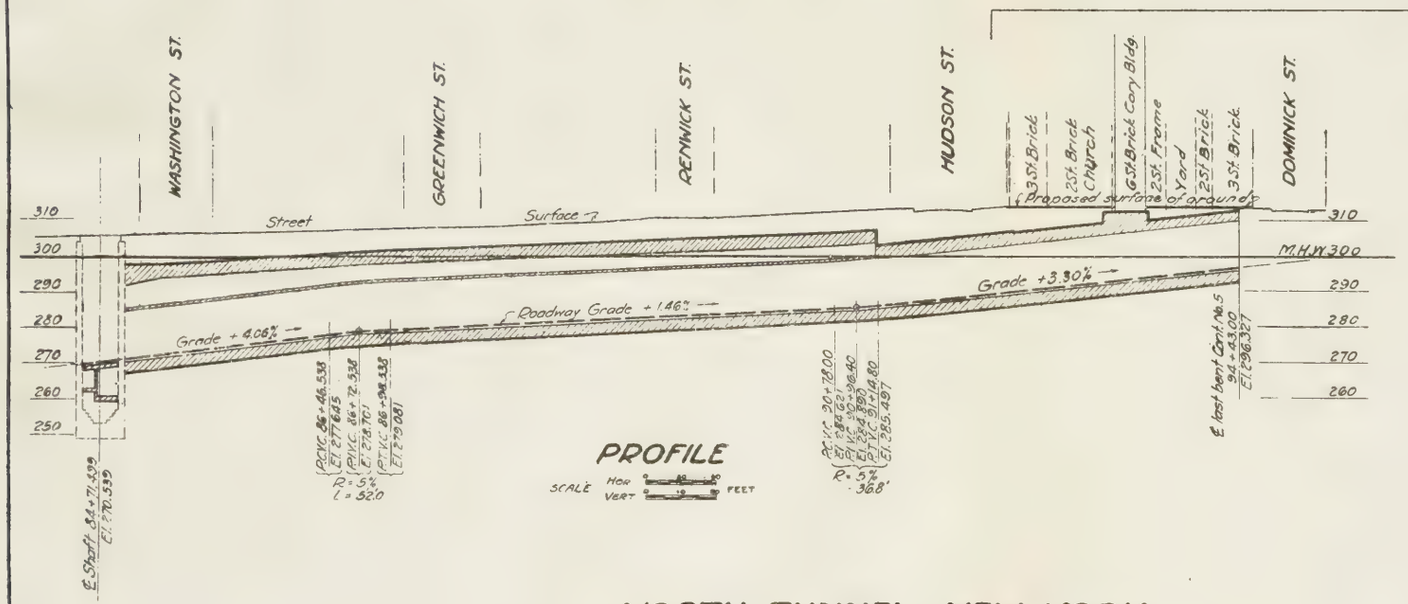


PLAN
SCALE: 0 30 60 FEET

Profile shows grades and elevations of roadway at center line of roadway.



KEY PLAN
SCALE: 0 200 400 FEET



PROFILE
SCALE HOR 0 40 80 FEET
VERT 0 8 16 FEET

For Plan & Profile of South Tunnel see	Drwg No. 2	File 1-5
For Structural Plans	" Drwgs. Nos. 3-24 incl.	" 1-5
For Sewer cons'n. Plan & Details	" " " 26-28 incl.	" 1-5
For Electrical Conduit Systems	" " " 29-31 incl.	" 1-5
For Area available for Contr's use	see Drwg. No 33	" 1-5
For Air measurement apparatus	" " " 32	" 1-5
For Details in shafts	" " " 25	" 1-5

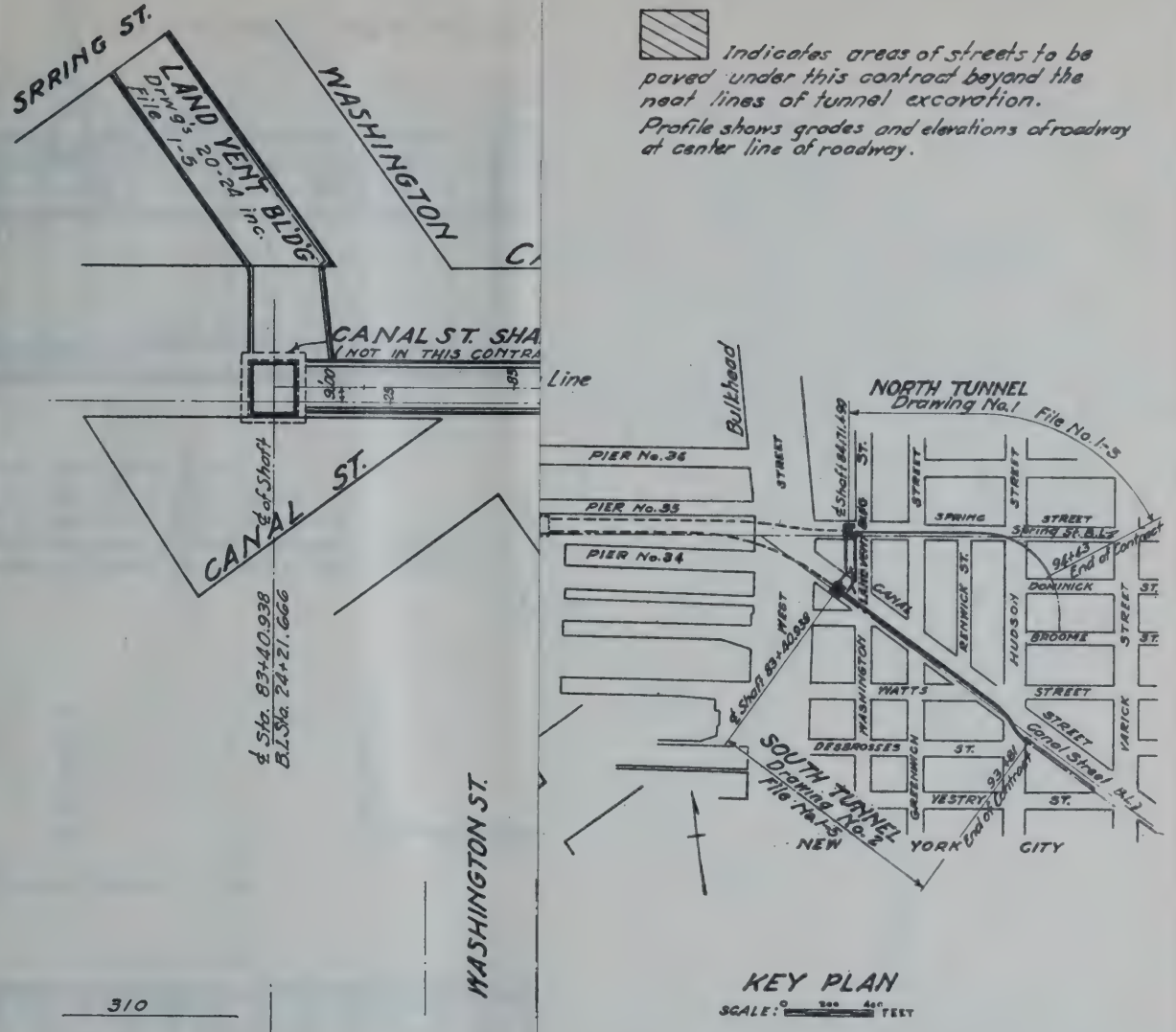
NORTH TUNNEL - NEW YORK
PLAN & PROFILE

Ole Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

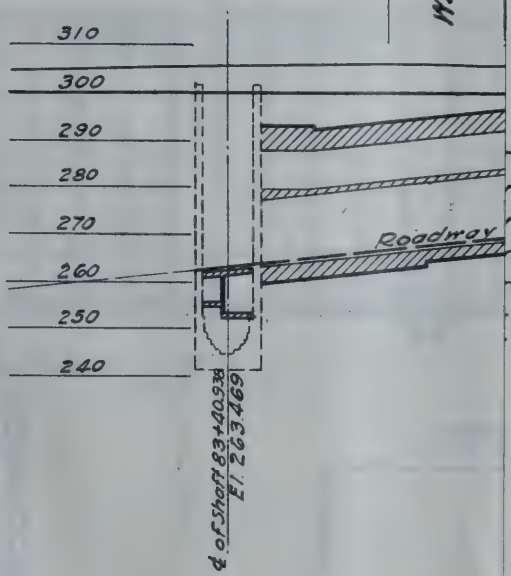
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 1

SCALE AS SHOWN
DATE: APRIL 23, 1928
DRAWN BY
CHECKED BY
CHIEF ENGINEER
FILE No. 1-5



Indicates areas of streets to be paved under this contract beyond the neat lines of tunnel excavation.

Profile shows grades and elevations of roadway at center line of roadway.



Plan & Profile of North Tunnel see	Drw'g No. 1	File 1-5
Structural Plans	" Drw'gs. Nos. 3-24 incl.	" 1-5
Sewer const'n. Plan & Details	" " " 26-28 incl.	" 1-5
Electrical Conduit Systems	" " " 29-31 incl.	" 1-5
Area available for Contr's use	" Drwg. No. 33	" 1-5
Air measurment apparatus	" " " 32	" 1-5
Details in Shafts	" " " 25	" 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 2

SCALE: AS SHOWN

DATE April 23, 1923

Otto Singstad
ENGINEER OF DESIGNS

DRAWN BY [illegible]
CHECKED BY [illegible]

Allen Hollman
CHIEF ENGINEER

FILE NO. I-5

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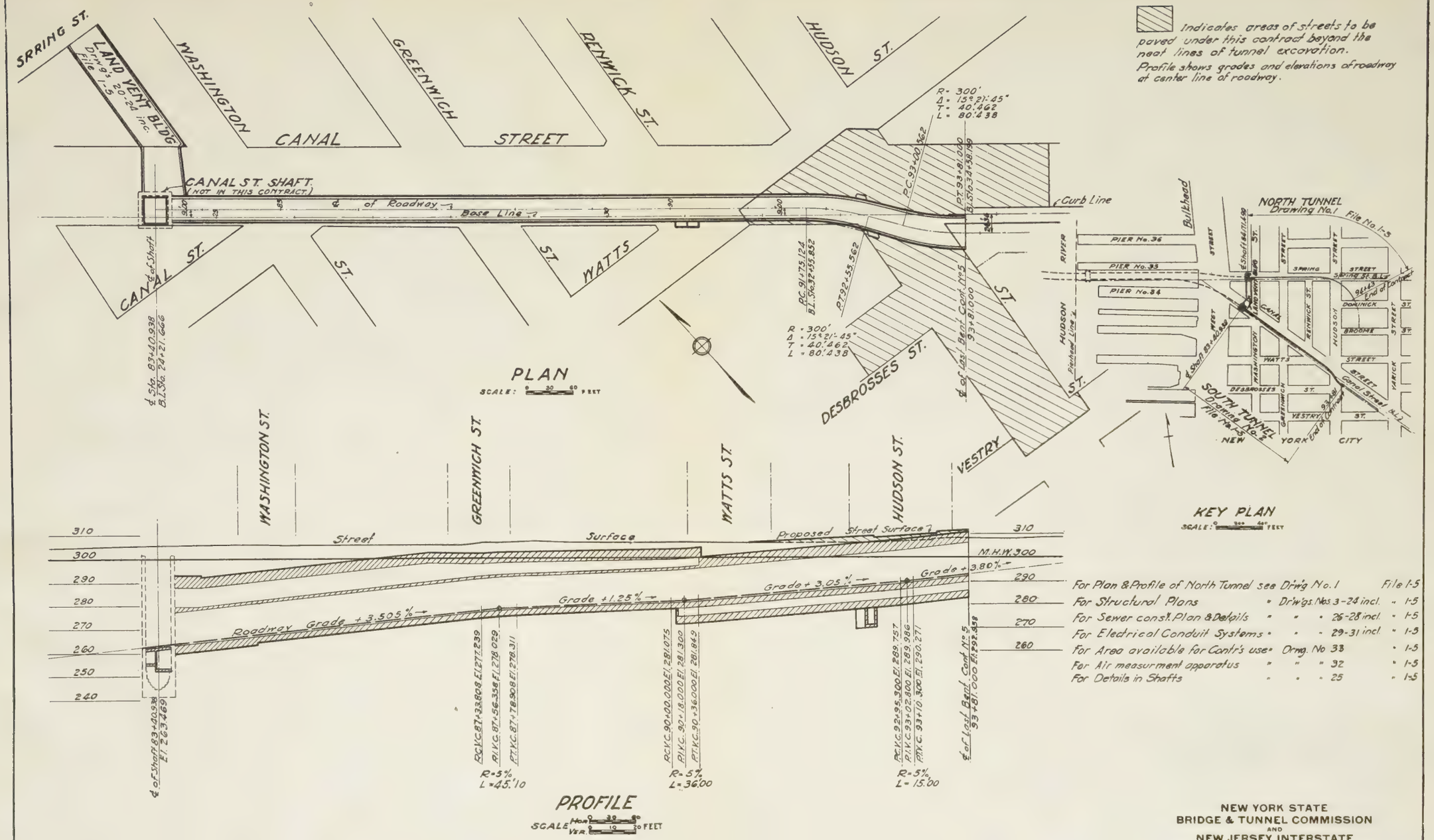


For Plan & Profile of North Tunnel see Drw'g No. 1 File 1-5
For Structural Plans " Drw'gs. Nos. 3-24 incl. " 1-5
For Sewer const'n. Plan & Details " " " 26-28 incl. " 1-5
For Electrical Conduit Systems " " " 29-31 incl. " 1-5
For Area available for Contr's use " Drwg. No. 33 " 1-5
For Air measurment apparatus " " " 32 " 1-5
For Details in Shafts " " " 25 " 1-5

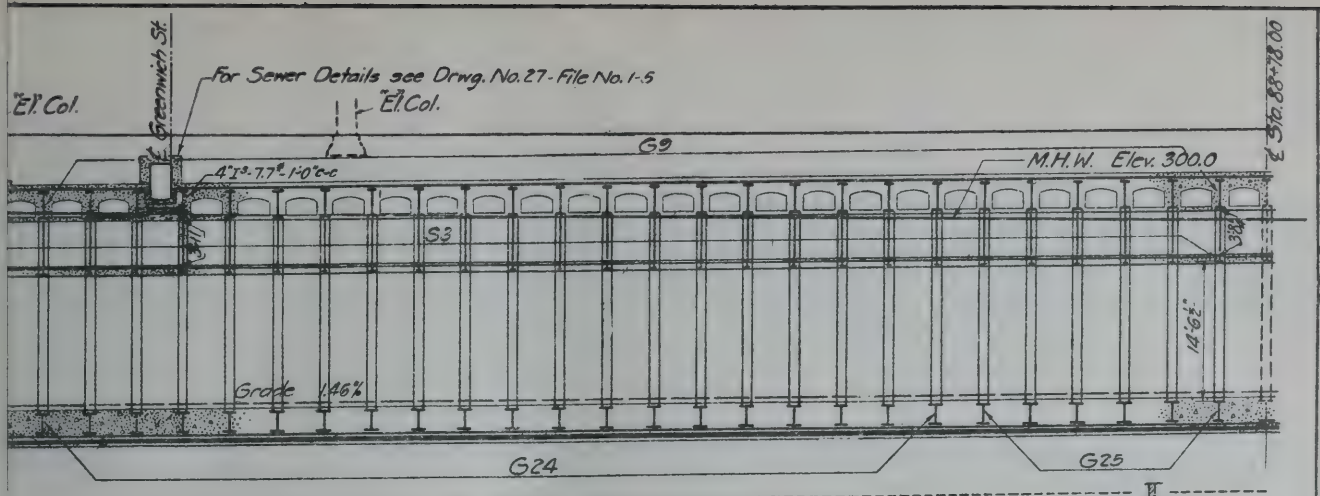
SOUTH TUNNEL - NEW YORK
PLAN & PROFILE

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

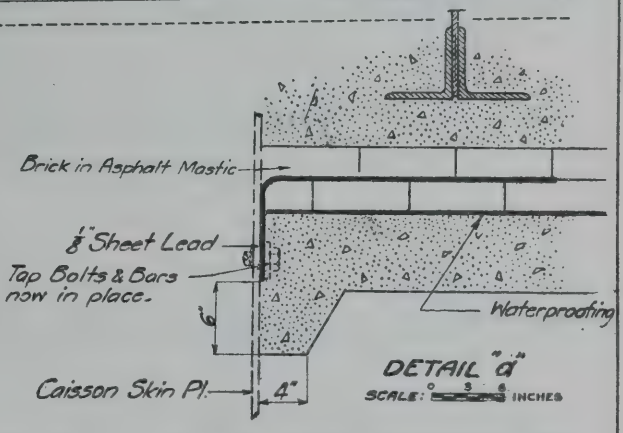
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 2

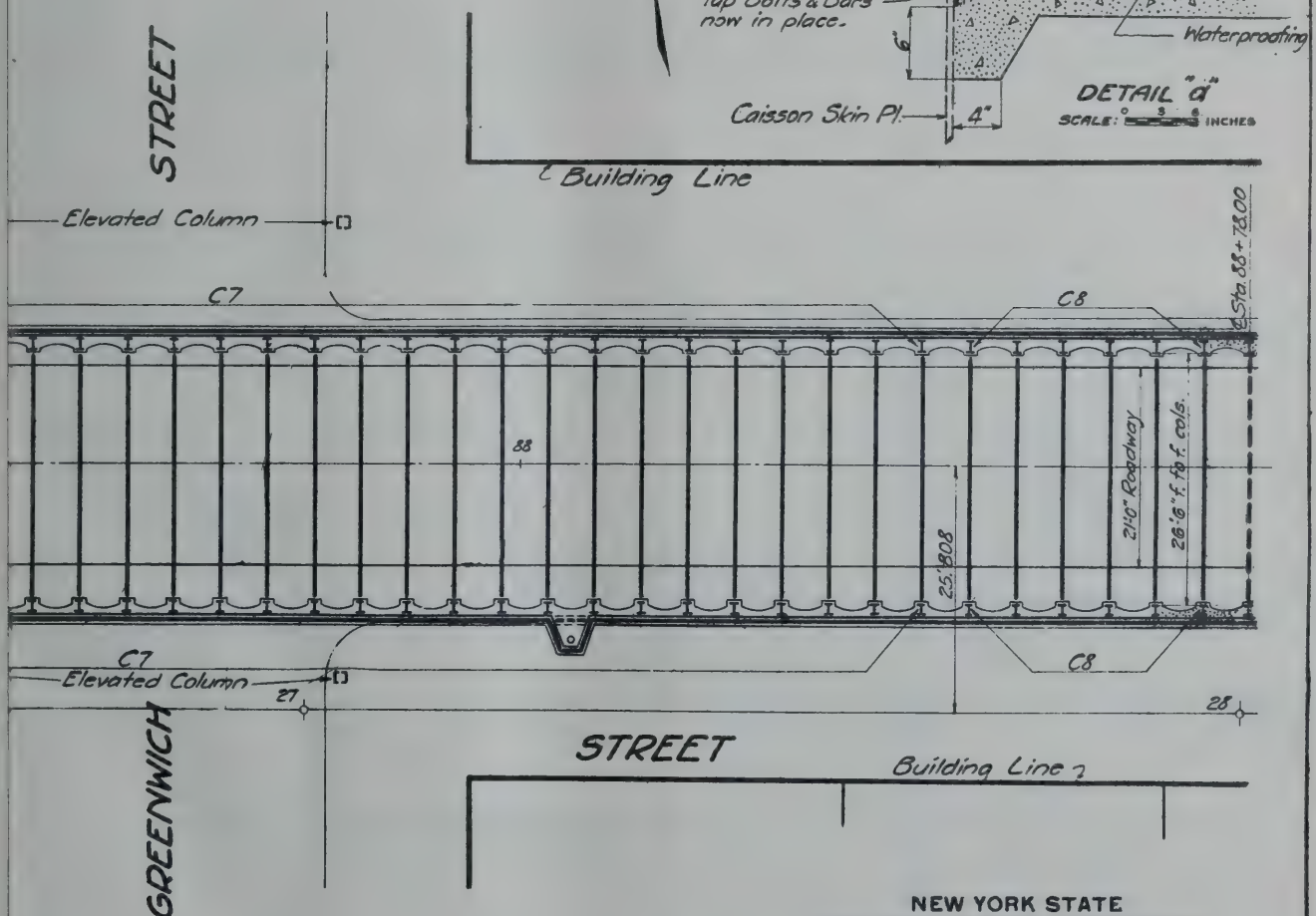
SCALE AS SHOWN
DATE APRIL 23, 1923
DRAWN BY E.P.M.
CHECKED BY O.H.A.
CHIEF ENGINEER
ENGINEER OF DESIGNS
FILE No. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.



nt limit for steel sheet piling
nt line for steel sheet piling is the
he roof of adjacent tunnel structure.
ow tunnel subgrade of lower payment limit for
iling, see schedule on drawing No 19, File No 1-5





Profile	see Drwg. No. 1	File No. 1-5
"	" " 25	" " 1-5
F-F	" " 9	" " 1-5
"	" " 14	" " 1-5
Duct on Top	" " 15	" " 1-5
"	" " 16	" " 1-5
Schedules	" " 19	" " 1-5
Building - N.Y.	" Drwgs. Nos. 20-24 incl.	" " 1-5
Systems	" " 29-30	" " 1-5
"	" Drwg. No. 18	" " 1-5
Pipe System	" " 13	" " 1-5
Details	" " 9	" " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 3

SCALE: 0 5 10 FEET

DATE: APRIL 28, 1923

Clifford Holland
CHIEF ENGINEER

DRAWN BY J.K.L.
CHECKED BY O.K.C.

FILE NO. 1-5

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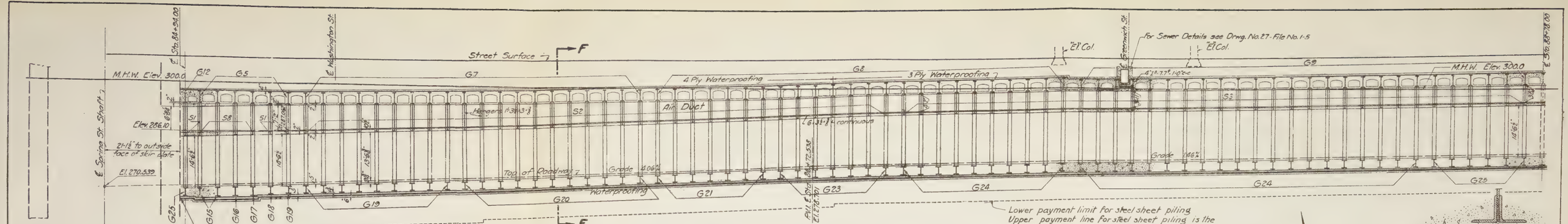

PLAN

General Note: Bents 5'-0" c.c. unless noted.

NORTH TUNNEL - NEW YORK

For Alinement and Profile	see Drwg. No. 1	File No. 1-5
For Details in Shaft	" " 25	" " 1-5
For Cross Section A-F	" " 9	" " 1-5
For Interior Details	" " 14	" " 1-5
For Cross Section Air Duct on Top	" " 15	" " 1-5
For Concrete Details	" " 16	" " 1-5
For Girder & Column Schedules	" " 19	" " 1-5
For Canal Ventilation Building, N.Y.	Drwgs. Nos. 20-24 incl.	" " 1-5
For Electrical Conduit Systems	" " 29-30	" " 1-5
For Tunnel Manholes	Drwg. No. 18	" " 1-5
For Details of 6" Water Pipe System	" " 13	" " 1-5
For Air Duct Hanger Details	" " 9	" " 1-5

Ole Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
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NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 5

SCALE 0 5 10 FEET
DATE: APRIL 29, 1938
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Clifford Holland
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FILE NO. 1-5

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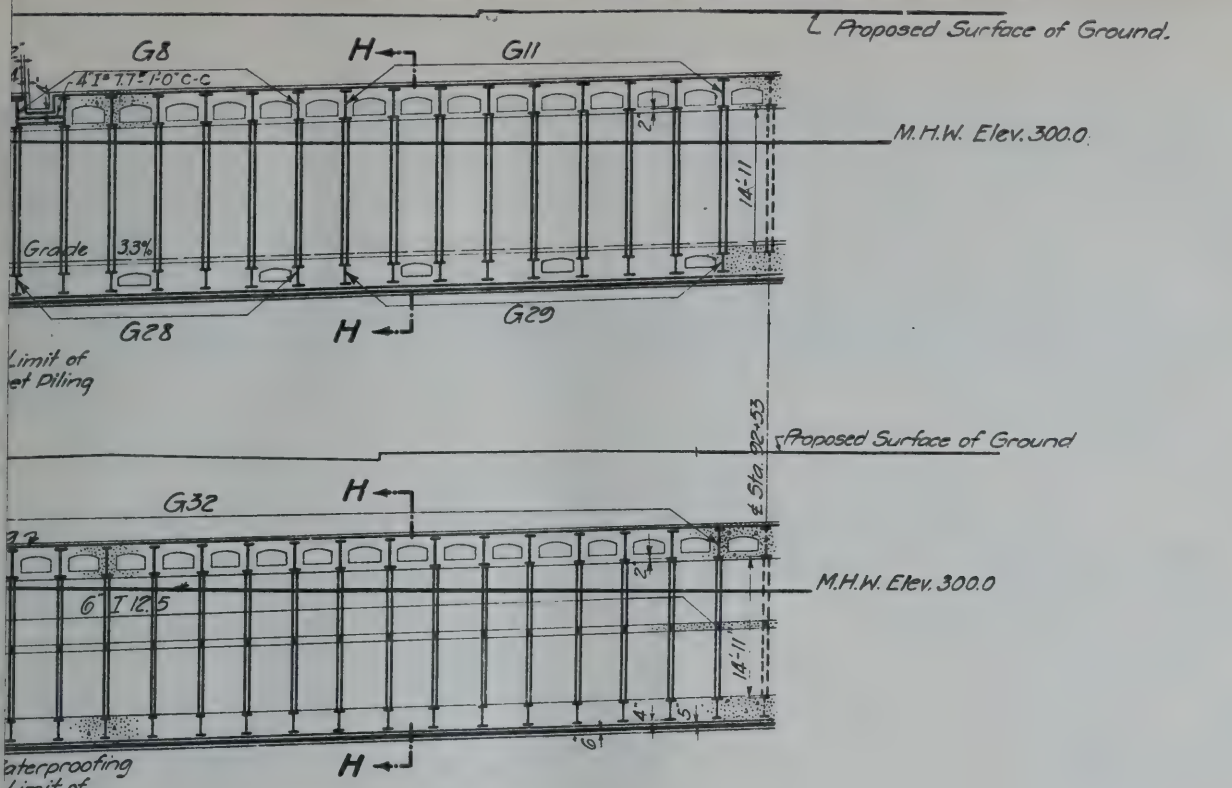
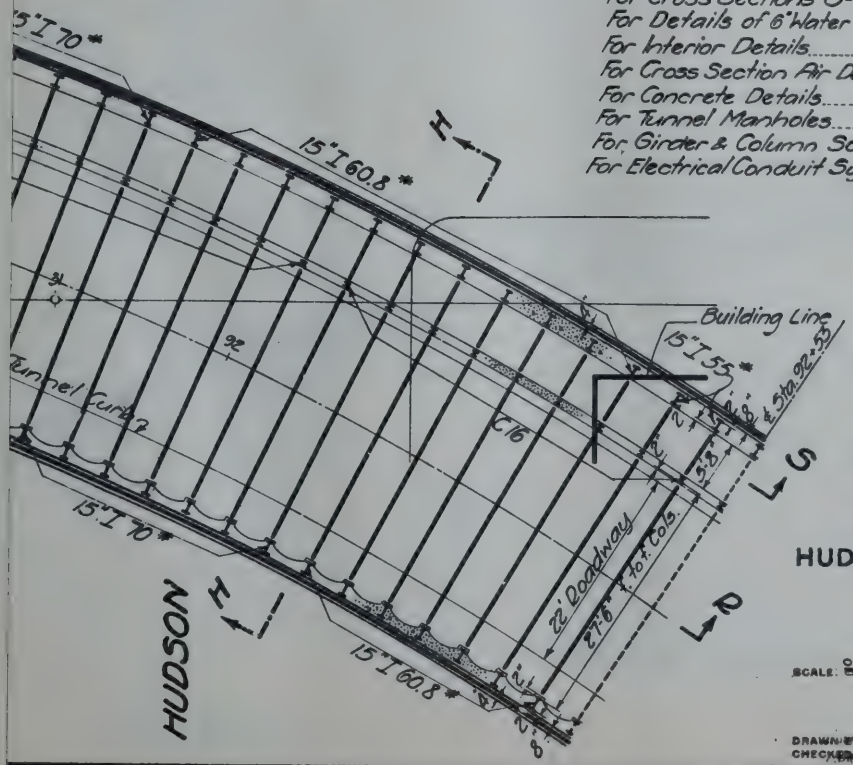


UDINAL SECTION S-S

STREET.

General Notes:
Bents 5'-0" ctrs on ℄ of roadway
For air duct hanger details see drawing No 9 File 1-5

For Alinement and Profile	see Drwg	No.	1	File	No 1-5
For Cross Sections G-G and H-H	"	"	12	"	" 1-5
For Details of 6" Water Pipe System	"	"	13	"	" 1-5
For Interior Details	"	"	14	"	" 1-5
For Cross Section Air Duct on Top & on Side	"	"	15	"	" 1-5
For Concrete Details	"	"	16	"	" 1-5
For Tunnel Manholes	"	"	18	"	" 1-5
For Girder & Column Schedules	"	"	19	"	" 1-5
For Electrical Conduit Systems	"	"	29,30	"	" 1-5



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 4

SCALE: 0 5 10 FEET

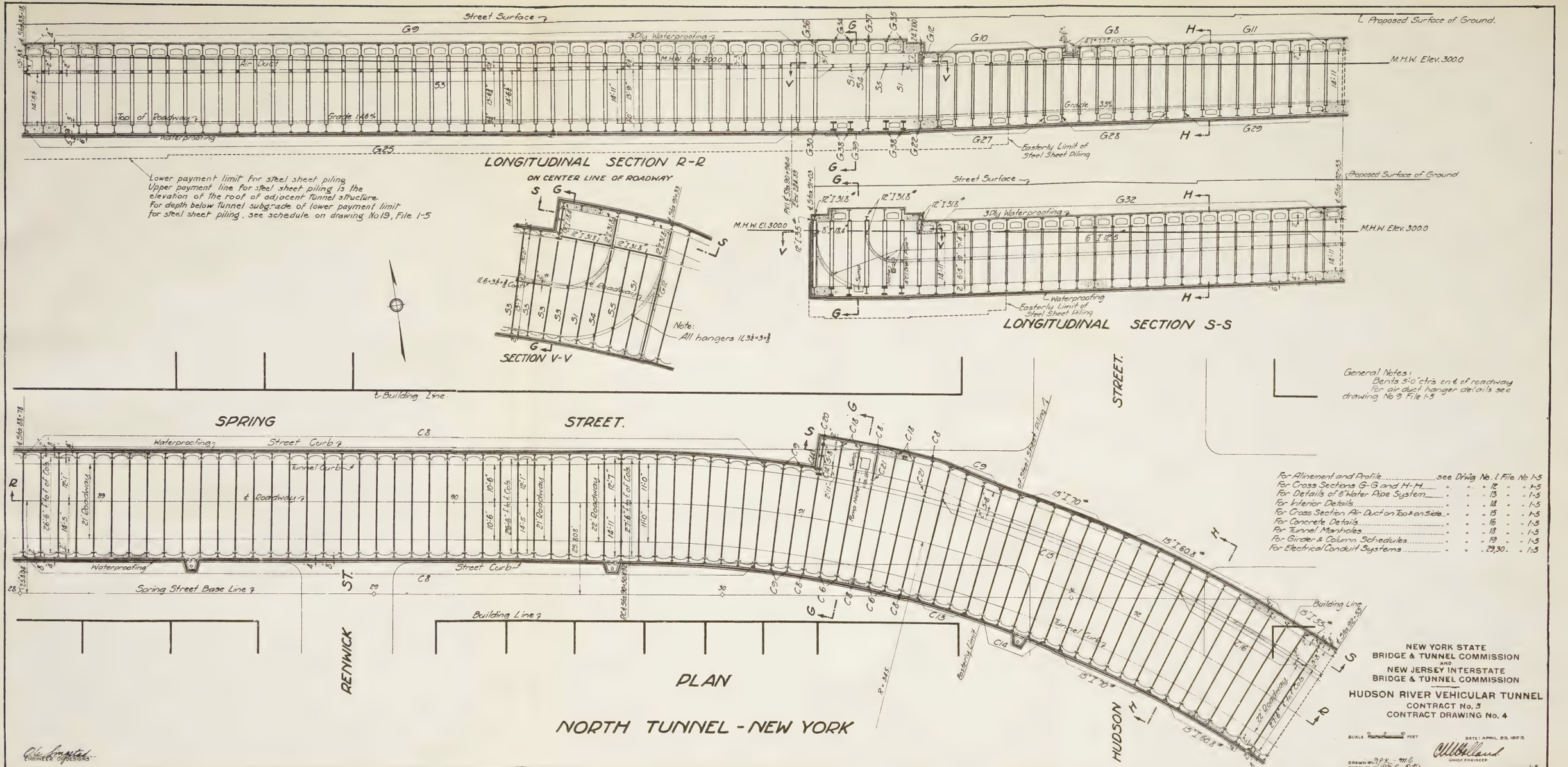
DATE: APRIL 23, 1923

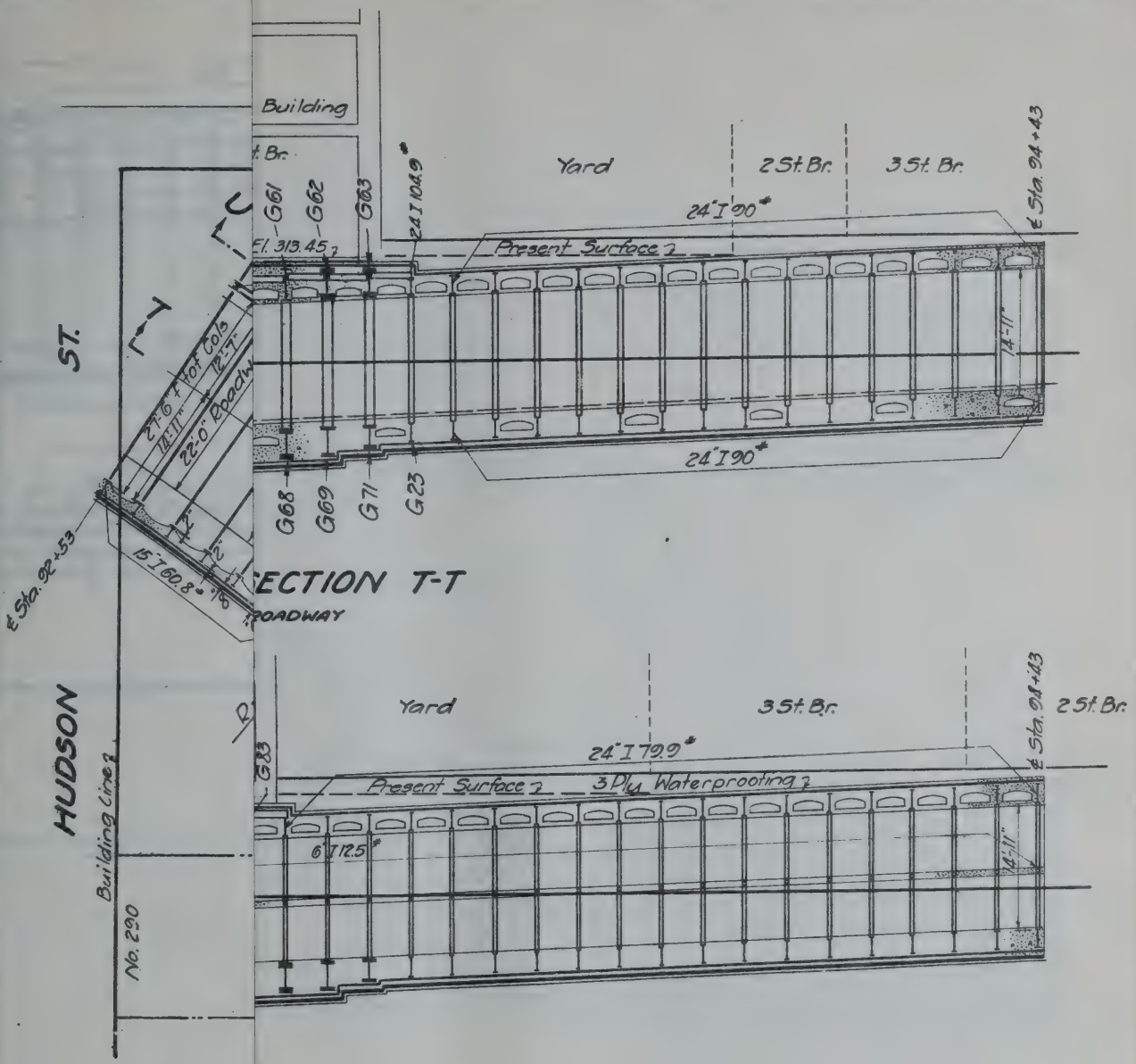
CHIEF ENGINEER

DRAWN BY P.P.K. - M.C.
CHECKED BY P.F.S. O.Z.G.

FILE NO 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.


Street Surface
3 Dly Waterproofing
Proposed Surface of Ground.
M.H.W. Elev. 3000
Air Duct
Top of Roadway
Grade 1.46%
Grade 3.3%
Waterproofing
Easterly Limit of Steel Sheet Piling
Lower payment limit for steel sheet piling
Upper payment line for steel sheet piling is the elevation of the roof of adjacent tunnel structure
For depth below tunnel subgrade of lower payment limit for steel sheet piling, see schedule on drawing No 19, File 1-5
LONGITUDINAL SECTION R-R
ON CENTER LINE OF ROADWAY
LONGITUDINAL SECTION S-S
SECTION V-V
Note:
All hangers 1 C 38 × 3 1/8
Waterproofing
Street Curb
Tunnel Curb
℄ Roadway
Spring Street Base Line
Building Line
SPRING STREET.
RENWICK ST.
HUDSON STREET.
Tunnel Curb
Easterly Limit
PLAN
NORTH TUNNEL - NEW YORK
General Notes:
Bents 5'-0" ctrs on ℄ of roadway
For air duct hanger details see drawing No 9 File 1-5
For Alinement and Profile ... see Drwg No. 1 File No 1-5
For Cross Sections G-G and H-H ... " " " 12 " " 1-5
For Details of 6" Water Pipe System ... " " " 13 " " 1-5
For Interior Details ... " " " 14 " " 1-5
For Cross Section Air Duct on Top or on Side ... " " " 15 " " 1-5
For Concrete Details ... " " " 16 " " 1-5
For Tunnel Manholes ... " " " 18 " " 1-5
For Girder & Column Schedules ... " " " 19 " " 1-5
For Electrical Conduit Systems ... " " " 29,30 " " 1-5
NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 3
CONTRACT DRAWING No. 4
SCALE FEET
DATE: APRIL 23, 1928
DRAWN BY
CHECKED BY
FILE NO 1-5
CHIEF ENGINEER
ENGINEER OF DESIGNS
M.B. BROWN PRINTING & BINDING CO. N.Y.



For Alinement and Profile	see Drw'g No. 1 File No. 1-5
For Cross Section I-I and Details of 6" Water Pipe System	" " " 13 " " 1-5
For Interior Details	" " " 14 " " 1-5
For Cross Section Air Duct on Side	" " " 15 " " 1-5
For Concrete Details	" " " 16 " " 1-5
For Tunnel Manholes	" " " 18 " " 1-5
For Girder & Column Schedules	" " " 19 " " 1-5
For Electrical Conduit Systems	" " " 29,30 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 5

SCALE: 0 5 10 FEET

DATE: APRIL 23, 1923

DRAWN BY S.P.K. M.L. J.C.

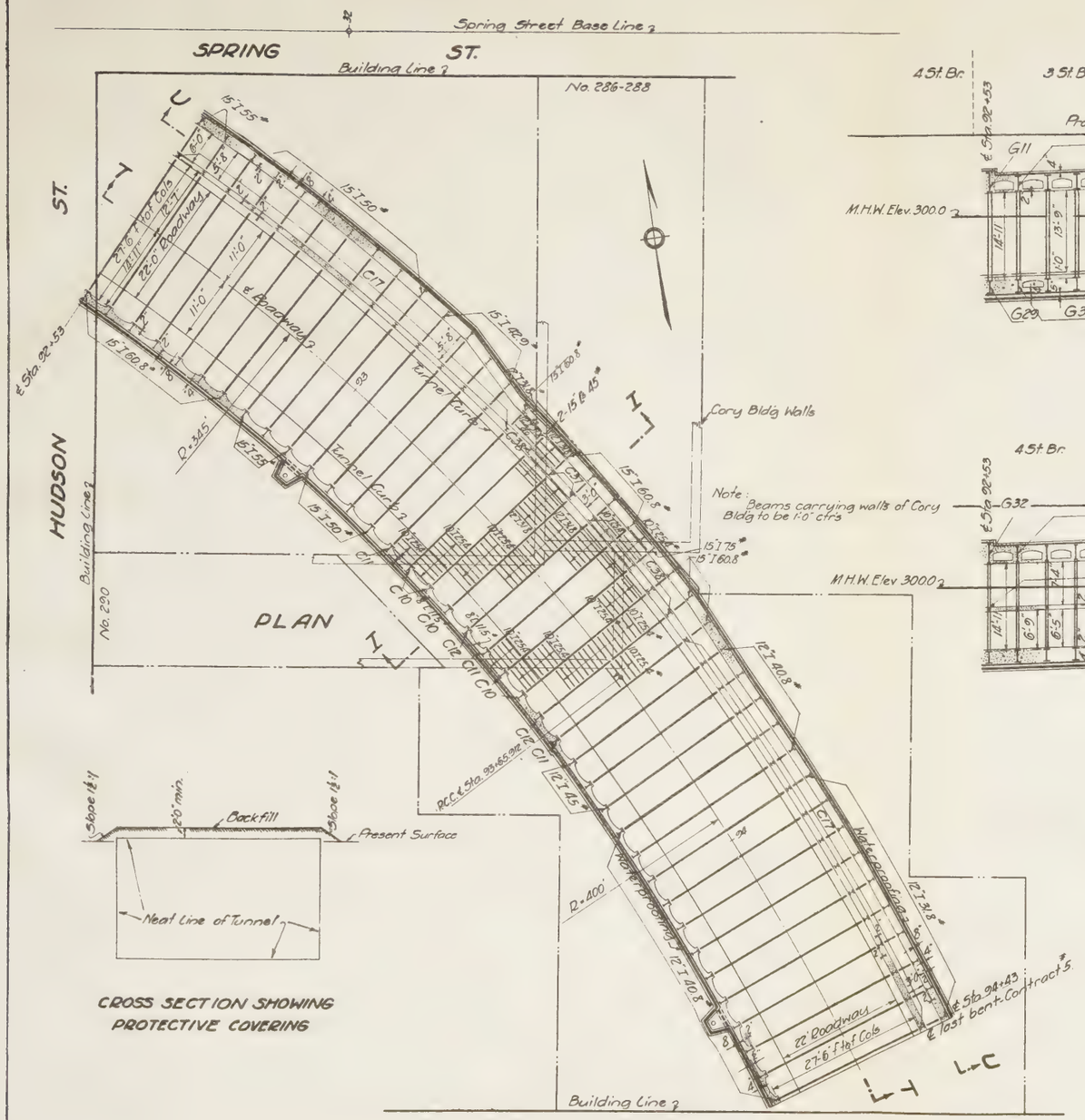
CHECKED BY O.H.A.

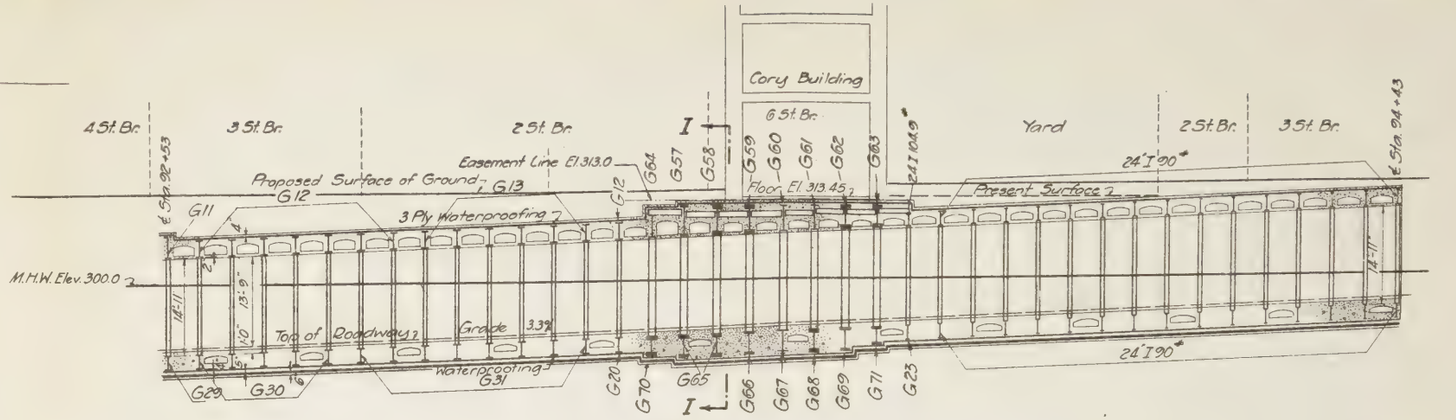
CHIEF ENGINEER

ENGINEER OF DESIGNS

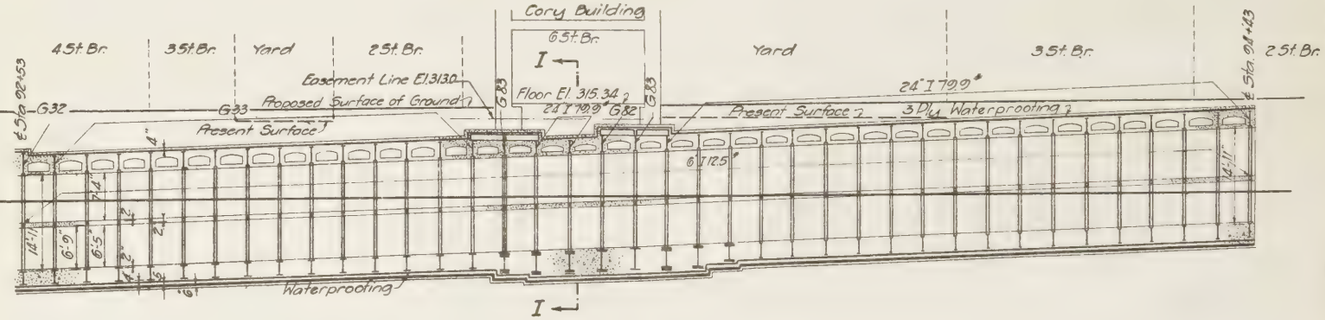
FILE No. 1-5

J.B. BROWN PRINTING & BINDING CO., N.Y.





LONGITUDINAL SECTION T-T
ON CENTER OF ROADWAY



LONGITUDINAL SECTION U-U

Bents radial and 5'-0" c to c on ℄ of roadway

For Alinement and Profile	see Drwg No. 1 / File No. 1-5
For Cross Section I-I and Details of 6" Water Pipe System	" " " 13 " " 1-5
For Interior Details	" " " 14 " " 1-5
For Cross Section Air Duct on Side	" " " 15 " " 1-5
For Concrete Details	" " " 16 " " 1-5
For Tunnel Manholes	" " " 18 " " 1-5
For Girder & Column Schedules	" " " 19 " " 1-5
For Electrical Conduit Systems	" " " 29,30 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 5

NORTH TUNNEL - NEW YORK

SCALE 0 1 2 3 4 5 FEET

DATE: APRIL 29, 1929

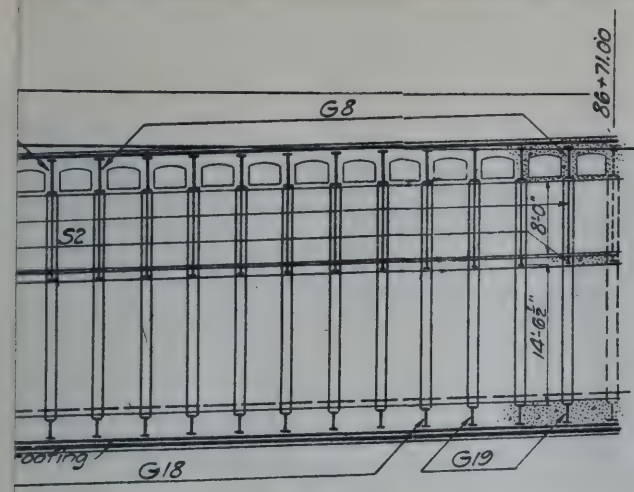
DRAWN BY S.P.K. m & j.c
CHECKED BY R.F.G.

CHIEF ENGINEER

FILE No. 1-5

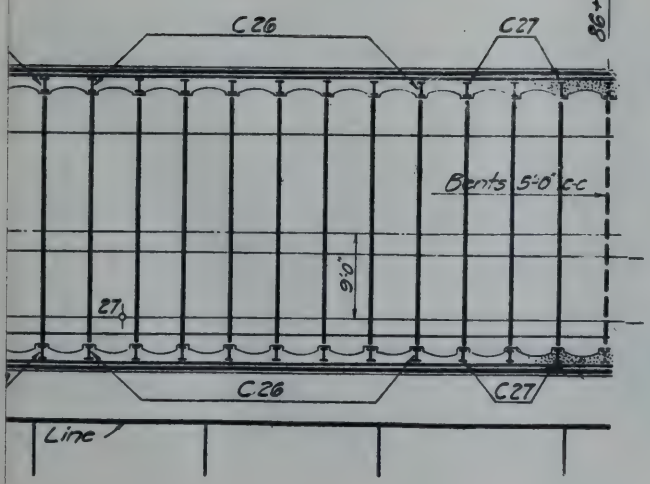
Approved
ENGINEER OF DESIGNS

J. B. BROWN PRINTING & BINDING CO. N.Y.



nt limit for steel sheet piling
nt line for steel sheet piling is the
e roof of adjacent tunnel structure.
w tunnel subgrade of lower payment
el sheet piling, see schedule on drawing No. 19 - File No. 1-5

For Alinement & Profile	see Drwg. No. 2	File No. 1-5
For Cross Section A-A	" " 9	" " 1-5
For Air Duct Hanger Details	" " 9	" " 1-5
For Details of 6" Water System	" " 13	" " 1-5
For Interior Details	" " 14	" " 1-5
For Cross Section Air Duct on Top	" " 15	" " 1-5
For Concrete Details	" " 16	" " 1-5
For Tunnel Manholes	" " 18	" " 1-5
For Girder & Column Schedules	" " 19	" " 1-5
For Land Ventilation Building, N.Y.	" Drwgs. Nos. 20-24 incl.	" " 1-5
For Electrical Conduit Systems	" " 29-30	" " 1-5
For High Tension Duct Splicing Chamber	" Drwg. No. 17	" " 1-5
For Details in Shaft	" " 25	" " 1-5



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 6

SCALE: 0 5 10 FEET

DATE: APRIL 25, 1925

CHIEF ENGINEER

DRAWN BY M.G.
CHECKED BY H.O.B.

FILE NO. 1-5

GIRDERS

MARK	WEB	4 Lŝ	COVER PLATES
G1	36×$\frac{9}{16}$	8×6×$\frac{9}{16}$	
G2	36×$\frac{7}{16}$	8×6×$\frac{7}{16}$	
G3	36×$\frac{5}{8}$	8×6×$\frac{7}{16}$	
G4	36×$\frac{5}{8}$	8×6×$\frac{5}{8}$	
G5	36×$\frac{5}{8}$	8×6×$\frac{11}{16}$	
G6	36×$\frac{7}{16}$	8×6×$\frac{5}{8}$	
G7	36×$\frac{3}{8}$	8×6×$\frac{5}{8}$	
G8	36×$\frac{3}{8}$	6×6×$\frac{5}{8}$	
G9	34×$\frac{3}{8}$	6×6×$\frac{5}{8}$	
G10	36×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G11	36×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G12	30×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G13	30×$\frac{3}{8}$	6×4×$\frac{1}{2}$	
G14	30×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G15	28×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G16	28×$\frac{3}{8}$	8×6×$\frac{13}{16}$	
G17	28×$\frac{7}{16}$	8×6×$\frac{1}{2}$	
G18	24×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G19	24×$\frac{3}{8}$	8×6×$\frac{7}{16}$	
G20	24×$\frac{3}{8}$	8×6×$\frac{7}{16}$	
G21	24×$\frac{1}{2}$	8×6×$\frac{7}{16}$	
G22	24×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G23	24×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G24	24×$\frac{3}{8}$	8×6×$\frac{3}{8}$	
G25	24×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
G26	24×$\frac{3}{8}$	8×6×$\frac{7}{16}$	
G27	24×$\frac{1}{2}$	6×6×$\frac{3}{8}$	
G28	24×$\frac{1}{2}$	6×6×$\frac{7}{16}$	
G29	24×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G30	24×$\frac{3}{8}$	6×6×$\frac{1}{2}$	
G31	24×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G32	36×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
G33	30×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
G34	34×$\frac{1}{2}$	8×8×$\frac{13}{16}$	
G35	34×$\frac{9}{16}$	8×6×$\frac{7}{16}$	
G36	34×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G37	34×$\frac{3}{8}$	6×6×$\frac{5}{8}$	
G38	24×$\frac{11}{16}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×23'-6"
G39	24×$\frac{9}{16}$	8×6×$\frac{11}{16}$	
G40	48×$\frac{3}{8}$	8×8×$\frac{1}{2}$	2-18×$\frac{7}{16}$×16'-6"
G41	48×$\frac{1}{2}$	8×6×$\frac{3}{8}$	
G42	36×$\frac{1}{2}$	6×6×$\frac{3}{8}$	
G43	30×$\frac{7}{16}$	8×6×$\frac{11}{16}$	
G44	30×$\frac{7}{16}$	8×6×$\frac{3}{8}$	
G45	30×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
G46	30×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G47	24×$\frac{7}{16}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×23'-3"
G48	24×$\frac{9}{16}$	8×6×$\frac{1}{2}$	2-18×$\frac{1}{2}$×21'-3"
G49	24×$\frac{9}{16}$	8×6×$\frac{3}{8}$	2-18×$\frac{7}{16}$×20'-0"
G50	24×$\frac{7}{16}$	6×6×$\frac{3}{8}$	2-14×$\frac{3}{8}$×24'-6"
G51	32×$\frac{1}{2}$	8×8×$\frac{3}{8}$	
G52	34×$\frac{9}{16}$	6×6×$\frac{3}{8}$	
G53	34×$\frac{9}{16}$	6×6×$\frac{9}{16}$	
G54	30×$\frac{11}{16}$	8×6×$\frac{11}{16}$	
G55	30×$\frac{7}{16}$	6×6×$\frac{3}{8}$	
G56	24×$\frac{9}{16}$	6×6×$\frac{11}{16}$	2-14×$\frac{11}{16}$×11'-6"
G57	54×$\frac{7}{16}$	6×6×$\frac{9}{16}$	2-14×$\frac{1}{2}$×18'-6"
	$\frac{3}{8}$"+$\frac{1}{2}$"+2'-6"		
G58	50×$\frac{11}{16}$	8×6×$\frac{3}{8}$	2-18×$\frac{1}{2}$×20'-0"
			2-18×$\frac{1}{2}$×15'-6"

COLUMNS

MARK	WEB	4 Lŝ	COVER PLATES
G59	48×$\frac{11}{16}$	6×6×$\frac{3}{8}$	2-14×$\frac{3}{8}$×19'-0"
			2-18×$\frac{3}{8}$×13'-0"
G60	46×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
G61	44×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
G62	40×$\frac{5}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×19'-6"
			2-18×$\frac{1}{2}$×18'-6"
G63	38×$\frac{1}{2}$	8×6×$\frac{11}{16}$	2-18×$\frac{3}{8}$×18'-0"
			2-18×$\frac{1}{2}$×10'-6"
G64	40×$\frac{1}{2}$	6×4×$\frac{3}{8}$	
G65	36×$\frac{3}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{1}{2}$×20'-6"
			2-18×$\frac{1}{2}$×13'-6"
G66	36×$\frac{11}{16}$	8×6×$\frac{3}{8}$	2-18×$\frac{9}{16}$×17'-0"
G67	36×$\frac{3}{8}$	8×6×$\frac{11}{16}$	
G68	36×$\frac{3}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×20'-6"
			2-18×$\frac{1}{2}$×16'-0"
G69	36×$\frac{3}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×18'-0"
G70	30×$\frac{3}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{1}{2}$×21'-6"
			2-18×$\frac{1}{2}$×16'-6"
G71	30×$\frac{3}{8}$	8×6×$\frac{3}{8}$	2-18×$\frac{3}{8}$×18'-6"
G72	24×$\frac{3}{8}$	8×8×$\frac{3}{8}$	2-18×$\frac{3}{8}$×22'-6
G73	24×$\frac{3}{8}$	8×6×$\frac{11}{16}$	
G74	24×$\frac{3}{8}$	8×6×$\frac{13}{16}$	
G75	18×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
G76	18×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
G77	12×$\frac{11}{16}$	6×6×$\frac{3}{8}$	
G78	12×$\frac{9}{16}$	6×6×$\frac{11}{16}$	
G79	12×$\frac{9}{16}$	6×6×$\frac{3}{8}$	
G80	12×$\frac{3}{8}$	6×5×$\frac{5}{16}$	
G81	12×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
G82	28×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
G83	26×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
G84	30×$\frac{9}{16}$	8×6×$\frac{3}{8}$	
G85	30×$\frac{9}{16}$	6×6×$\frac{11}{16}$	
G86	34×$\frac{7}{16}$	8×6×$\frac{3}{8}$	
G87	28×$\frac{3}{8}$	8×8×$\frac{3}{8}$	2-18×$\frac{7}{16}$×17'-6"
G88	14×$\frac{11}{16}$	8×6×$\frac{3}{8}$	
G89	48×$\frac{3}{16}$	8×8×$\frac{3}{8}$	2-18×$\frac{1}{4}$×26'-6"
	$\frac{45}{64}$×$\frac{3}{16}$×6-6		2-18×$\frac{3}{8}$×20'-0"
G90	48×$\frac{11}{16}$	8×8×$\frac{3}{8}$	2-18×$\frac{3}{8}$×28'-8"
	$\frac{45}{64}$×$\frac{3}{16}$×6-6		2-18×$\frac{3}{8}$×20'-0"
G91	36×$\frac{29}{16}$	8×6×$\frac{3}{8}$	

COLUMNS

MARK	WEB	4 Lŝ	COVER PLATES ETC.
C1	16×$\frac{3}{8}$	6×6×$\frac{3}{8}$	2-14×$\frac{7}{16}$
C2	16×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
C3	16×$\frac{7}{16}$	6×6×$\frac{7}{16}$	
C4	16×$\frac{7}{16}$	6×6×$\frac{3}{8}$	
C5	16×$\frac{7}{16}$	6×6×$\frac{5}{8}$	
C6	14×$\frac{9}{16}$	6×6×$\frac{3}{8}$	
C7	14×$\frac{7}{16}$	6×6×$\frac{5}{8}$	
C8	14×$\frac{1}{2}$	6×6×$\frac{1}{2}$	
C9	14×$\frac{7}{16}$	6×6×$\frac{1}{2}$	
C10	14×$\frac{7}{16}$	6×4×$\frac{3}{8}$	
C11	14×$\frac{7}{16}$	6×4×$\frac{7}{16}$	
C12	14×$\frac{9}{16}$	6×4×$\frac{1}{2}$	
C13	12×$\frac{9}{16}$	6×6×$\frac{5}{8}$	
C14	12×$\frac{3}{8}$	6×6×$\frac{1}{2}$	
C15	6×$\frac{3}{8}$	4×3×$\frac{5}{16}$	
C16	6×$\frac{3}{8}$	4×3×$\frac{3}{8}$	
C17	6×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
C18	18×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
C19	14×$\frac{3}{8}$	6×6×$\frac{1}{2}$	
C20	18×$\frac{3}{8}$	6×6×$\frac{3}{8}$	12"[@40#
C21	10×$\frac{3}{8}$	5×3½×$\frac{3}{8}$	
C22	18×$\frac{7}{16}$	8×6×$\frac{3}{8}$	
C23	18×$\frac{3}{8}$	6×6×$\frac{11}{16}$	
C24	16×$\frac{7}{16}$	8×6×$\frac{3}{8}$	
C25	16×$\frac{7}{16}$	6×6×$\frac{3}{8}$	
C26	16×$\frac{3}{8}$	6×6×$\frac{5}{8}$	
C27	16×$\frac{3}{8}$	6×6×$\frac{7}{16}$	
C28	14×$\frac{7}{16}$	6×6×$\frac{7}{16}$	
C29	14×$\frac{7}{16}$	6×6×$\frac{3}{8}$	
C30	14×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
C31	12×$\frac{7}{16}$	6×6×$\frac{3}{8}$	
C32	12×$\frac{3}{8}$	6×6×$\frac{1}{2}$	
C33	12×$\frac{7}{16}$	5×3½×$\frac{3}{8}$	
C34	12×$\frac{3}{8}$	5×3½×$\frac{5}{16}$	
C35	12×$\frac{1}{2}$	5×3½×$\frac{7}{16}$	
C36	14×$\frac{7}{16}$	8×6×$\frac{3}{8}$	
C37	12×$\frac{3}{8}$	6×4×$\frac{1}{2}$	
C38	12×$\frac{3}{8}$	6×4×$\frac{7}{16}$	
C39	18×$\frac{7}{16}$	6×6×$\frac{3}{8}$	2-15"[@33.9#
C40	18×$\frac{7}{16}$	8×6×$\frac{11}{16}$	
C41	18×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
C42	18×$\frac{7}{16}$	5×3½×$\frac{3}{8}$	2-18×$\frac{7}{16}$
C43	6×$\frac{3}{8}$	4×3×$\frac{3}{8}$	
C44	16×$\frac{3}{8}$	6×6×$\frac{3}{8}$	2-15"[@33.9
C45	18×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
C46	18×$\frac{3}{8}$	8×8×$\frac{3}{8}$	
C47	18×$\frac{7}{16}$	8×6×$\frac{11}{16}$	

STRUTS

MARK	WEB	4 Lŝ	COVER PLATES
S1	6×$\frac{3}{8}$	4×3×$\frac{5}{16}$	
S2	6×$\frac{3}{8}$	4×3×$\frac{3}{8}$	
S3	6×$\frac{3}{8}$	3½×3×$\frac{3}{8}$	
S4	6×$\frac{3}{8}$	5×3×$\frac{5}{16}$	2-12×$\frac{3}{8}$
S5	6×$\frac{3}{8}$	5×3×$\frac{7}{16}$	2-12×$\frac{1}{2}$
S6	6×$\frac{1}{2}$	5×3×$\frac{5}{16}$	2-12×$\frac{3}{8}$
S7	6×$\frac{3}{8}$	4×3×$\frac{3}{8}$	
S8	6×$\frac{1}{2}$	5×3×$\frac{5}{16}$	

GIRDERS

MARK	WEB	FLANGE	COVER PLATES
G101	36×$\frac{9}{16}$	4-24×$\frac{7}{16}$+2-7×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$
G102	36×$\frac{7}{16}$	2-24×$\frac{7}{16}$+2-7×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
		4 PL 12×$\frac{3}{8}$	2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×21'-0"
			2-20×$\frac{3}{8}$×12'-6"
G103	36×$\frac{11}{16}$	2-30×$\frac{7}{16}$+4-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
		2-30×$\frac{7}{16}$+5-6	2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×34'-0"
			2-20×$\frac{3}{8}$×9'-0"
G104	36×$\frac{3}{8}$	2-30×$\frac{7}{16}$+4-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
		2-30×$\frac{7}{16}$+7-6	2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×32'-6"
			2-20×$\frac{3}{8}$×20'-6"
G105	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+6-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×34'-0"
			2-20×$\frac{3}{8}$×19'-0"
G106	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+5-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×25'-6
			2-20×$\frac{7}{16}$×11'-6
G107	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+5-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×32'-6"
			2-20×$\frac{3}{8}$×13'-0"
G108	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+7-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×31'-0"
			2-20×$\frac{3}{8}$×12'-0"
G109	36×$\frac{11}{16}$	4-24×$\frac{7}{16}$+5-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
		4 PL 12×$\frac{3}{8}$	2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×30'-6"
			2-20×$\frac{3}{8}$×12'-0"
G110	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+5-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×31'-0
			2-20×$\frac{3}{8}$×13'-0"
G111	30×$\frac{3}{8}$	4-24×$\frac{7}{16}$+7-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
		4 PL 12×$\frac{3}{8}$	2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×31'-0
			2-20×$\frac{3}{8}$×13'-0"
G112	36×$\frac{3}{8}$	4-30×$\frac{7}{16}$+4-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×17'-0"
G113	24×$\frac{1}{2}$	2-18×$\frac{7}{16}$+2-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
G114	36×$\frac{3}{8}$	2-30×$\frac{7}{16}$+7-6×$\frac{7}{16}$	4L 3½×3½×$\frac{7}{16}$+1
			2-20×$\frac{3}{8}$" As shown
			2-20×$\frac{3}{8}$×10'-0"
G115	24×$\frac{3}{8}$		4L 6×6×$\frac{3}{8}$
G116	24×$\frac{3}{8}$		4L 8×6×$\frac{3}{8}$

COLUMNS

MARK	WEB	4 Lŝ	COVER PLATES ETC.
C101	14×$\frac{3}{8}$	6×3½×$\frac{3}{8}$	2-8×$\frac{3}{8}$
C102	16×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
C103	16×$\frac{3}{8}$	6×6×$\frac{1}{2}$	
C104	16×$\frac{3}{8}$	6×6×$\frac{7}{16}$	
C105	10×$\frac{3}{8}$	6×4×$\frac{7}{16}$	
C106	10×$\frac{3}{8}$	6×4×$\frac{3}{8}$	PL 14×$\frac{1}{2}$, 15"[@45#
C107	16×$\frac{1}{2}$	6×6×$\frac{3}{8}$	
C108	12×$\frac{3}{8}$	6×6×$\frac{3}{8}$	15"[@55#
C109	14×$\frac{3}{8}$	6×6×$\frac{3}{8}$	
C110	12×$\frac{3}{8}$	6×4×$\frac{3}{8}$	12"[@55#
C111	8×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
C112	10×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
C113	10×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
C114	10×$\frac{3}{8}$	6×4×$\frac{7}{16}$	
C115	10×$\frac{3}{8}$	6×4×$\frac{3}{8}$	
C116	10×$\frac{3}{8}$	6×4×$\frac{7}{16}$	
C117	10×$\frac{3}{8}$	6×4×$\frac{1}{2}$	2-13×$\frac{3}{8}$
C118	16×$\frac{3}{8}$	6×6×$\frac{3}{8}$	15"[@39.9#
C119	12×$\frac{3}{8}$	5×3½×$\frac{3}{8}$	
C120	12×$\frac{3}{8}$	5×3½×$\frac{3}{8}$	
C121	6×$\frac{3}{8}$	4×3×$\frac{3}{8}$	
C122	6×$\frac{3}{8}$	4×3×$\frac{5}{16}$	
C123			2L's 3×2½×$\frac{3}{8}$, $\frac{3}{8}$ b.b.

GIRDERS-CONTINUED

MARK	WEB	FLANGE	COVER PLATES
G117	58×$\frac{3}{8}$	4L 6×6×$\frac{3}{8}$	2-14×$\frac{3}{8}$×13'-6
			2-14×$\frac{3}{8}$×6'-6
G118	28×$\frac{3}{8}$	4L 6×6×$\frac{3}{8}$	

STRUTS

MARK	WEB	4 Lŝ	
S101	8×$\frac{3}{8}$	4×3×$\frac{3}{8}$	

LAND VENTILATION BUILDING N.Y.

DEPTH BELOW TUNNEL SUBGRADE OF LOWER PAYMENT LIMIT FOR STEEL SHEET PILING

Depth of tunnel subgrade below M.H.W., El. 300	Depth below tunnel subgrade of lower payment limit for steel sheet piling
Under 18'	4'
18' : 22'	5'
22' 26'	6'
26' 30'	7'
30' 34'	8'
34' 38'	9'
Over 38'	10'

Easterly limits of Steel Sheet Piling North Tunnel at C.L. Sta. 91+58

Easterly limits of Steel Sheet Piling South Tunnel at C.L. Sta. 92+81

For location of members see Drawings Nos. 3-13 and 20-24 incl. File No. 1-5.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 3
CONTRACT DRAWING No. 19

DATE: APRIL 28, 1925

Ole Singstad
ENGINEER OF DESIGNS

Clifford Holland
CHIEF ENGINEER

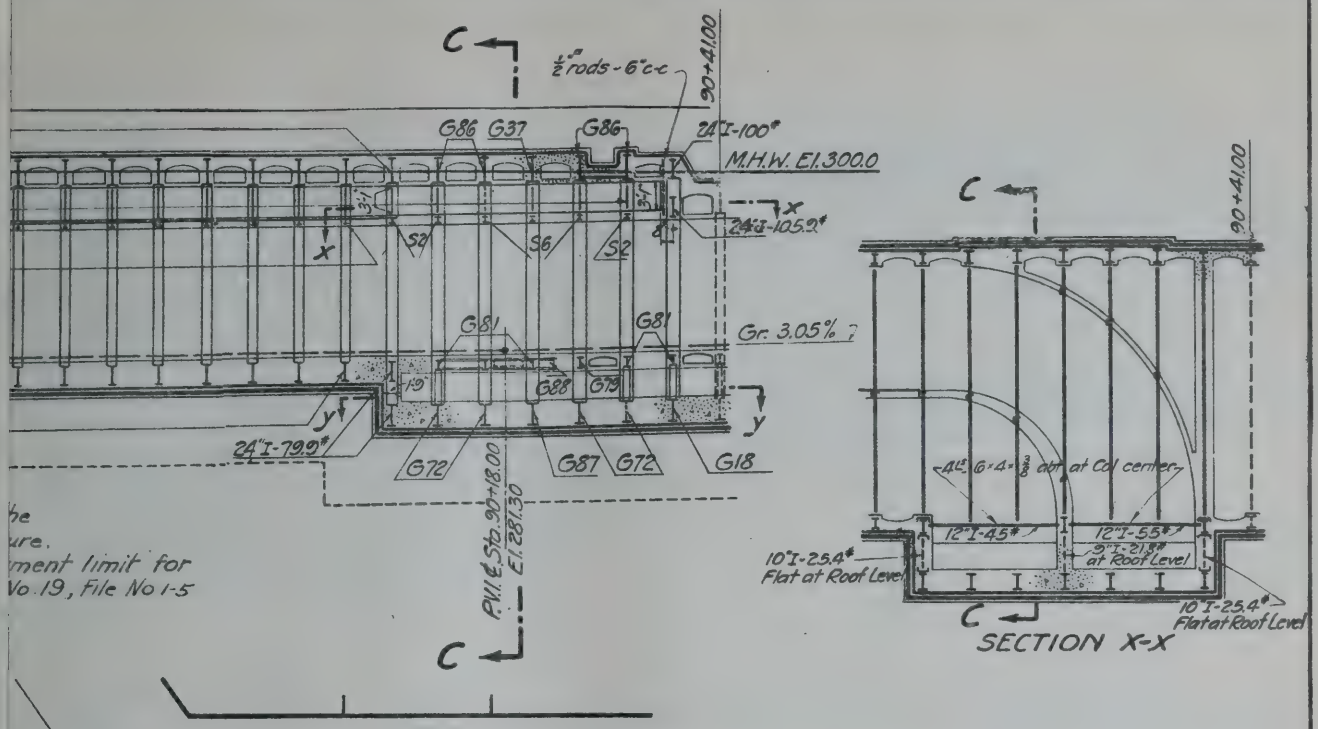
DRAWN BY J.P.K.
CHECKED BY F.A.C. & T.G.

FILE NO. 1-5

NORTH AND SOUTH TUNNELS N.Y.

GIRDER AND COLUMN SCHEDULES

M. E. BROWN PRINT NO. & BINDING CO., N.Y.



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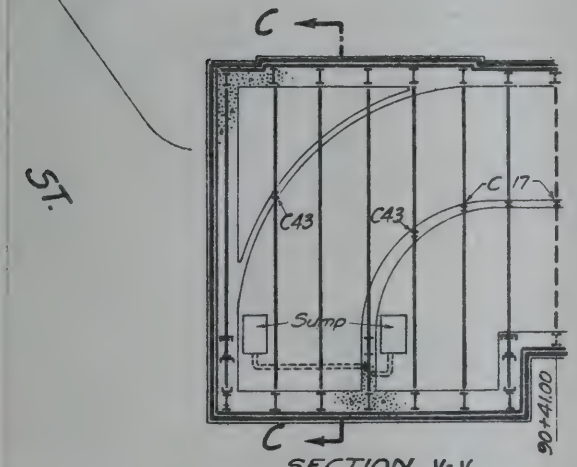
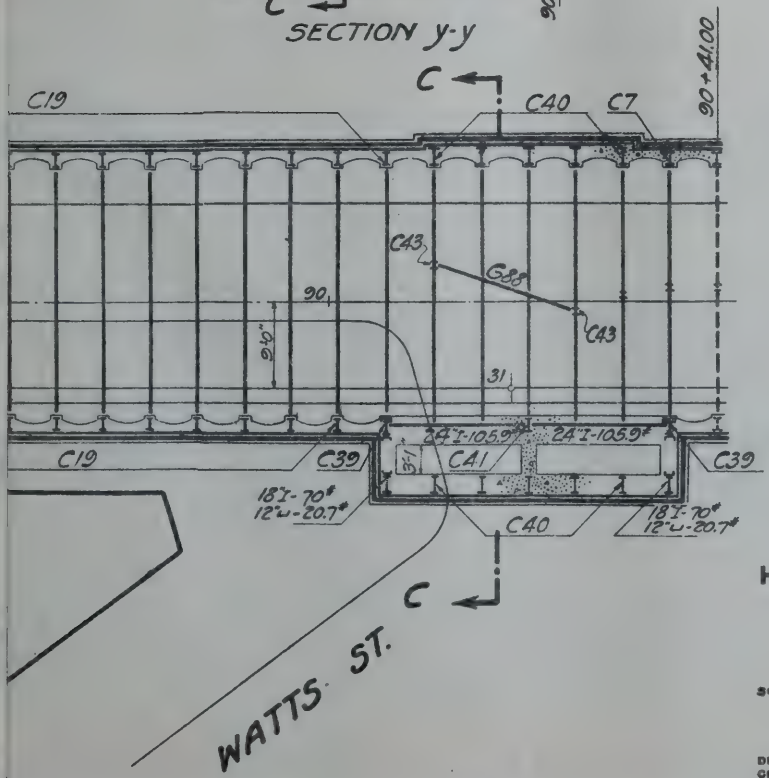
ment limit for
No. 19, File No 1-5



For Alinement & Profile	see Drwg. No.	2	File No. 1-5
For Cross Section B-B & C-C	" " "	10	" " 1-5
For Air Duct Hanger Details	" " "	9	" " 1-5
For Details of 6" Water System	" " "	13	" " 1-5
For Interior Details	" " "	14	" " 1-5
For Cross Section Air Duct on Top	" " "	15	" " 1-5
For Concrete Details	" " "	16	" " 1-5
For Tunnel Manholes	" " "	18	" " 1-5
For Girder & Column Schedules	" " "	19	" " 1-5
For Land Ventilation Building - N.Y.	" Drwgs. Nos.	20-24 incl.	" " 1-5
For Electrical Conduit Systems	" "	29-30	" " 1-5
For High Tension Duct Splicing Chamber	" Drwg. No.	17	" " 1-5



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 7

SCALE: 0 5 10 FEET

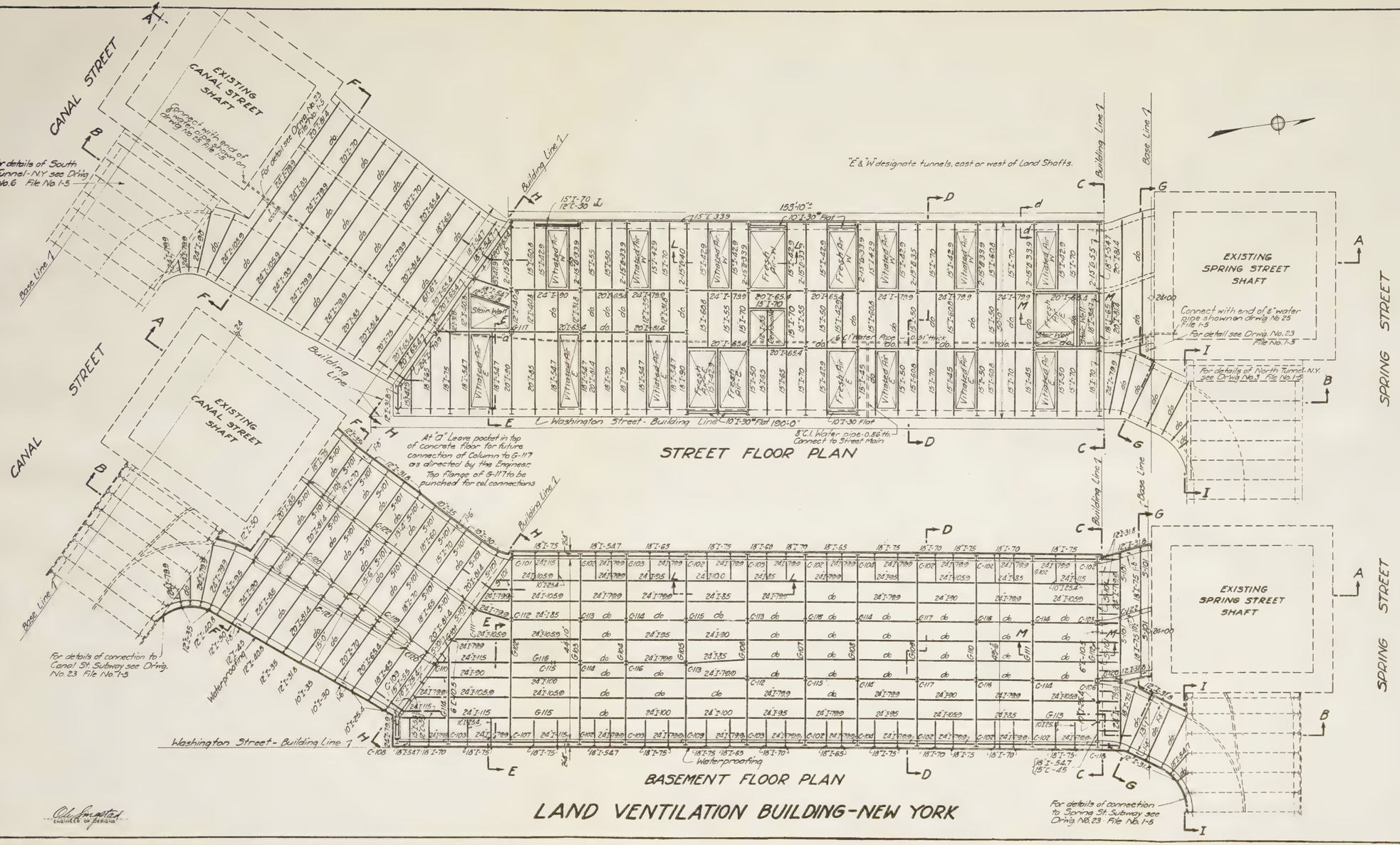
DATE: APRIL 23, 1925

C.H. Holland
CHIEF ENGINEER

DRAWN BY M.G.
CHECKED BY H.J.O.
O.K.B.

FILE NO. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.


CANAL STREET
EXISTING CANAL STREET SHAFT
Connect with end of 8" water drwg No 23 File No 1-5
For details of South Tunnel - N.Y. see Drwg No. 6 File No 1-5
Base Line 1
Building Line 1
Washington Street - Building Line
EXISTING SPRING STREET SHAFT
SPRING STREET
Connect with end of 6" water pipe shown on drwg No 25 File 1-5
For detail see Drwg. No. 23 File No. 1-5
For details of North Tunnel N.Y. see Drwg No. 3 File No. 1-5
"E" & "W" designate tunnels, east or west of Land Shafts.
At "O" Leave pocket in top of concrete floor for future connection of Column to G-117 as directed by the Engineer. Top flange of G-117 to be punched for cel connections
8" C.I. Water pipe - 0.88 Th. Connect to Street Main
Waterproofing
For details of connection to Canal St. Subway see Drwg. No. 23 File No 1-5
For details of connection to Spring St. Subway see Drwg. No. 23 File No. 1-5
STREET FLOOR PLAN
BASEMENT FLOOR PLAN

REFERENCE NOTES

For Cross Sections A-A, B-B, C-C and H-H see Dwg. No 21 File No 1-5
For Cross Sections D-D, E-E & d-d see Dwg. No 22 File No 1-5
For Cross Sections F-F, G-G and I-I see Dwg. No 23 File No 1-5
For Part Cross Sections A-A, B-B and Cross Sections L-L and M-M see Dwg. No 24 File No 1-5
For Girder and Column Schedule see Dwg. No 10 File No 1-5
For Basement Floor Drainage System see Drwgs. Nos. 21, 22 & 24 File No. 1-5

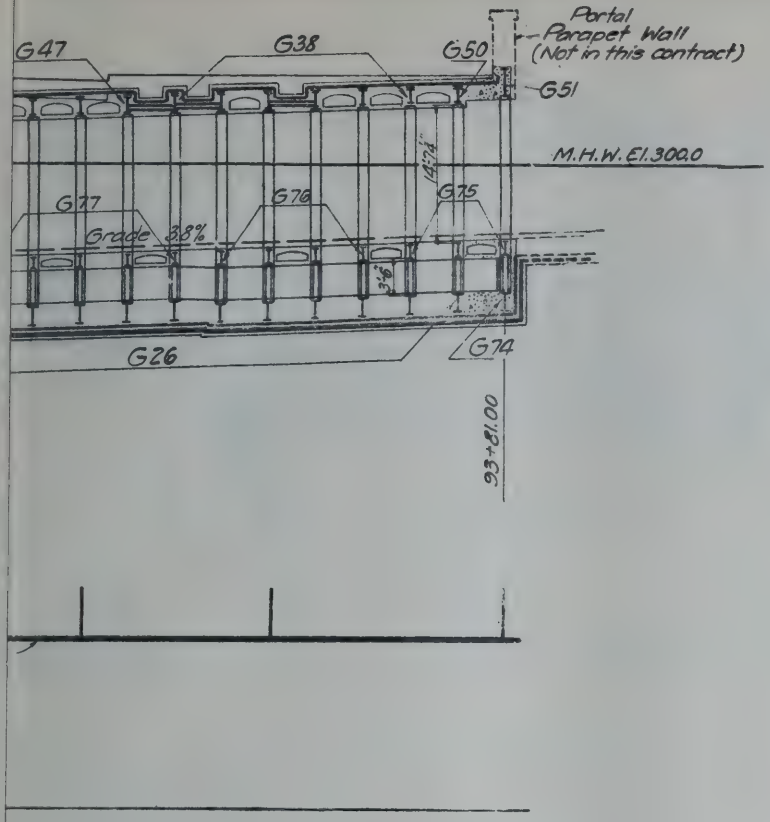
LAND VENTILATION BUILDING - NEW YORK

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

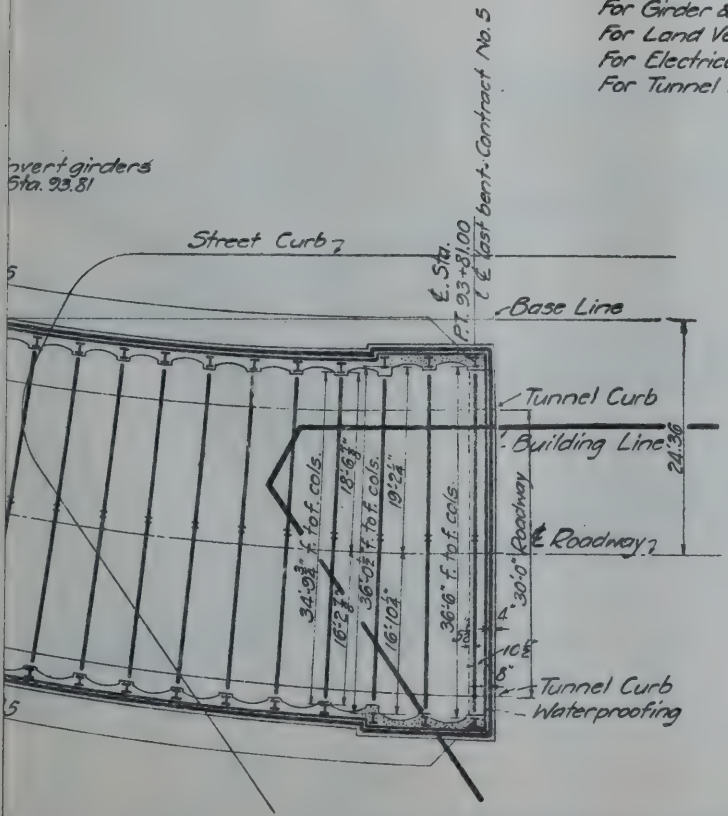
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 20

SCALE: 0 5 10 FT.
DATE: APRIL 29, 1925
DRAWN BY O.F.B.
CHECKED BY J.F.S.V.G.
CHIEF ENGINEER
FILE No. 1-5

ENGINEER OF DESIGNS



For Alinement and Profile	see Drwg. No. 2	File No. 1-5
For Cross Section D-D	" " " 9	" " 1-5
For Cross Section E-E	" " " 11	" " 1-5
For High Tension Splicing Chamber	" " " 17	" " 1-5
For Details of 6" Water Pipe System	" " " 13	" " 1-5
For Interior Details	" " " 14	" " 1-5
For Cross Section Air Duct at Bottom	" " " 15	" " 1-5
For Concrete Details	" " " 16	" " 1-5
For Girder & Column Schedules	" " " 19	" " 1-5
For Land Ventilation Building - N.Y.	" Drwgs. Nos. 20-24 incl.	" " 1-5
For Electrical Conduit Systems	" " 29-30	" " 1-5
For Tunnel Manholes	" Drwg. No. 18	" " 1-5



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 8

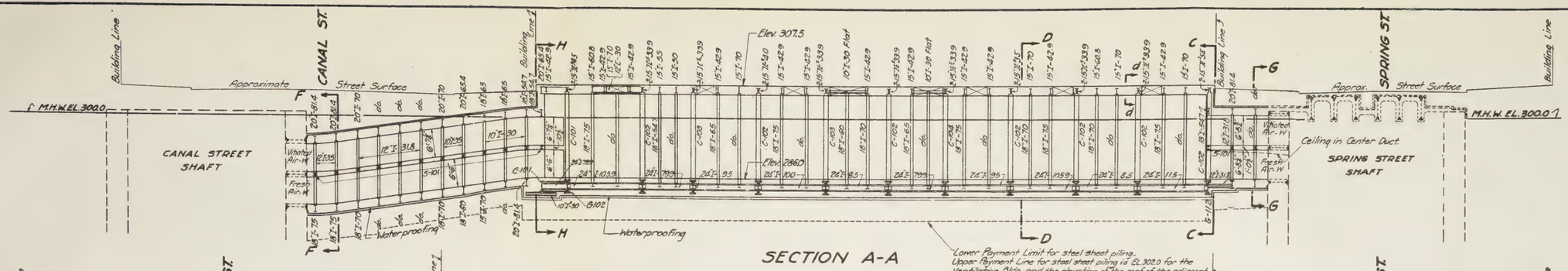
SCALE: 0 5 10 FEET

DATE: APRIL 23, 1929

CHIEF ENGINEER

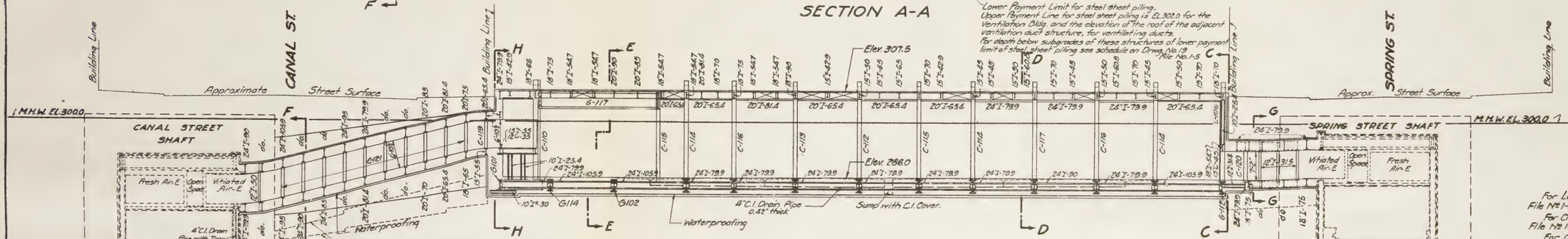
DRAWN BY F.P.K. - M.S.
CHECKED BY J.C. O.Z.B.

FILE NO. 1-5



SECTION A-A

Lower Payment Limit for steel sheet piling. Upper Payment Line for steel sheet piling is EL.302.0 for the Ventilation Bldg. and the elevation of the roof of the adjacent ventilation duct structure, for ventilating ducts. For depth below subgrades of these structures of lower payment limit of steel sheet piling see schedule on Drwg. No.19 File No. 1-5



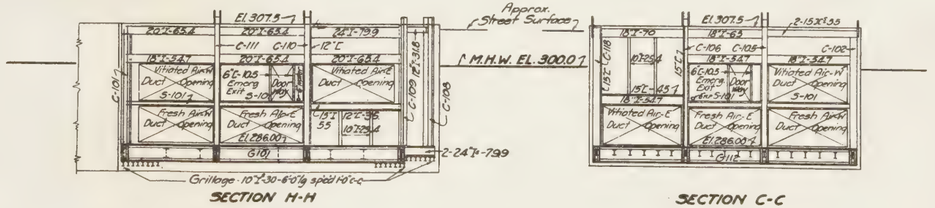
SECTION B-B

Lower Payment Limit for steel sheet piling. Upper Payment Line for steel sheet piling is EL.302.0 for the Ventilation Bldg. and the elevation of the roof of the adjacent ventilation duct structure, for ventilating ducts. For depth below subgrades of these structures of lower payment limit of steel sheet piling see schedule on Drwg. No.19 - File No. 1-5.

For details of South Tunnel - N.Y. see Drwg No. 6 File No. 1-5

For details of North Tunnel - N.Y. see Drwg. No. 3 File No. 1-3

"E" & "W" designate tunnels, east or west of Land Shafts.



SECTION H-H

SECTION C-C

REFERENCE NOTES

For Location of Sections see Dwg. No. 20 File No. 1-5

For Cross Sections D-D, E-E & G-G see Dwg. No. 22 File No. 1-5

For Cross Sections F-F and G-G see Dwg. No. 23 File No. 1-5

For Part Cross Sections A-A, B-B and Cross Sections L-L and M-M see Dwg. No. 24 File No. 1-5

For Girder and Column Schedule see Dwg. No. 19 File No. 1-5

For Location of Basement Floor Drainage System see also Drwg's. Nos. 22 & 24 File No. 1-5.

LAND VENTILATION BUILDING - NEW YORK

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 21

SCALE: 1/8" = 1'-0"

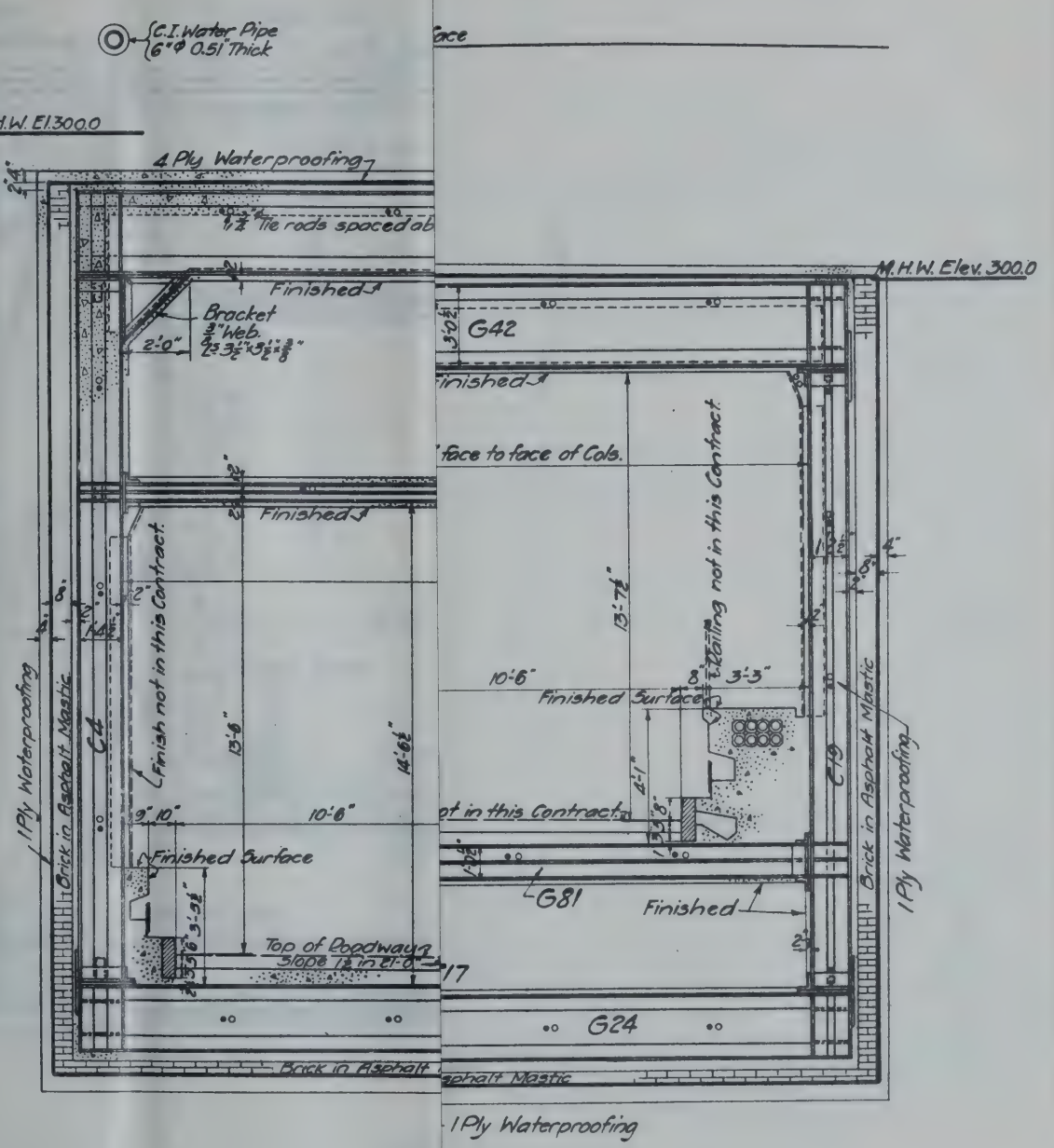
DATE: APRIL 23, 1953

CHIEF ENGINEER

DRAWN BY O.F.B.
CHECKED BY D.R. & E.L.G.

FILE NO. 1-5

ENGINEER OF DESIGNS



CROSS SECTION D-D
CROSS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 9

SCALE: 0 1 2 3

DATE: APRIL 25, 1925

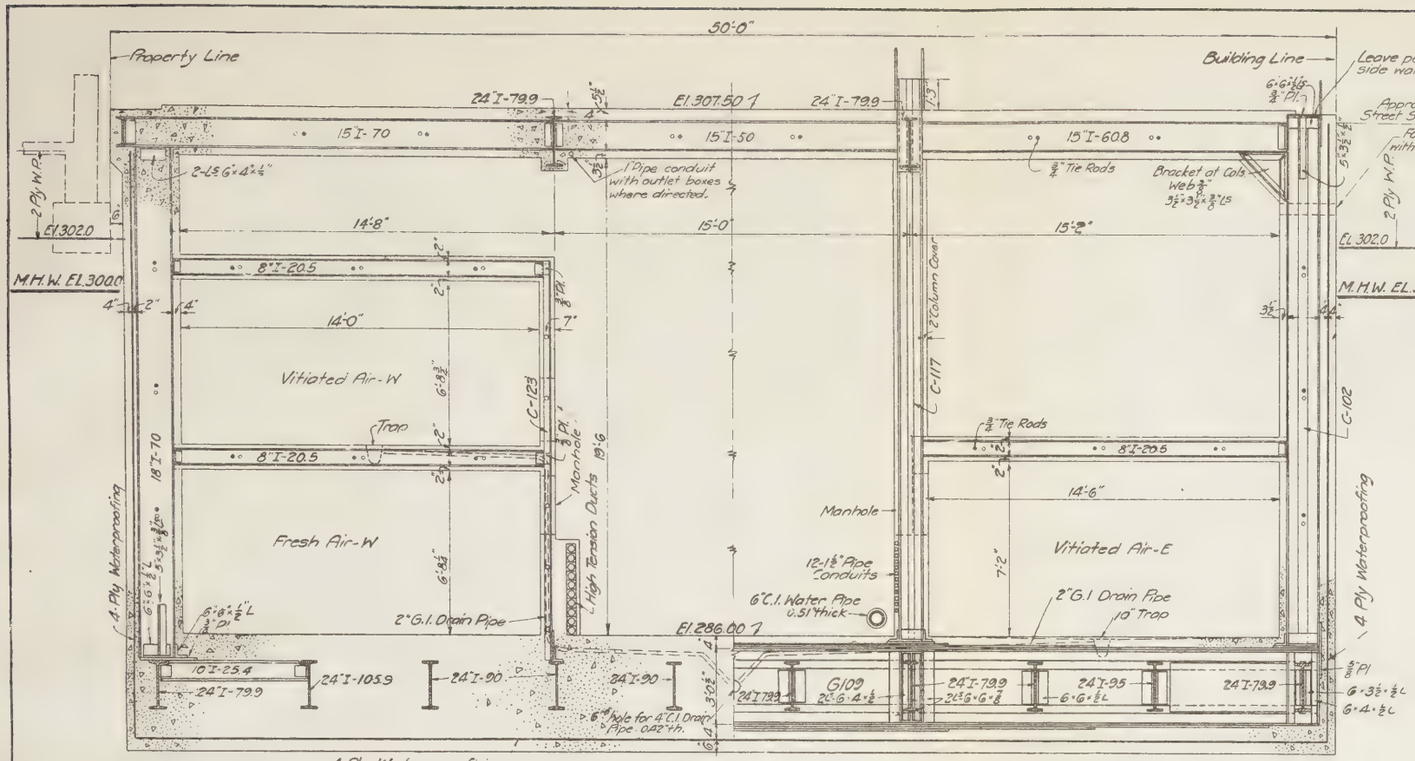
Ole Singstad
ENGINEER OF DESIGN

Clifford Holland
CHIEF ENGINEER

DRAWN BY I.P.K.
CHECKED BY G.S. J.R.

FILE No. 1-5

M.E. BROWN PRINTING & BINDING CO. N.Y.



REFERENCE NOTES

For Location of Cross Sections see Dwg. No. 20 File No. 1-5

For Girder and Column Schedule see Dwg. No. 19 File No. 1-5

For Additional detail of Air Ducts in basement see Dwg. No. 24 File No. 1-5

For 6" Water Pipe System see Dwgs. Nos. 20 & 24 File No. 1-5

For Location of Basement Floor Drainage System see also Dwgs. No. 21 & 24 File No. 1-5

For Location of Air Duct Manholes see Dwg. No. 24 File No. 1-5

LAND VENTILATION BUILDING - NEW YORK

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 22

SCALE 0 1 2 3 FT.

DATE APRIL 29, 1925

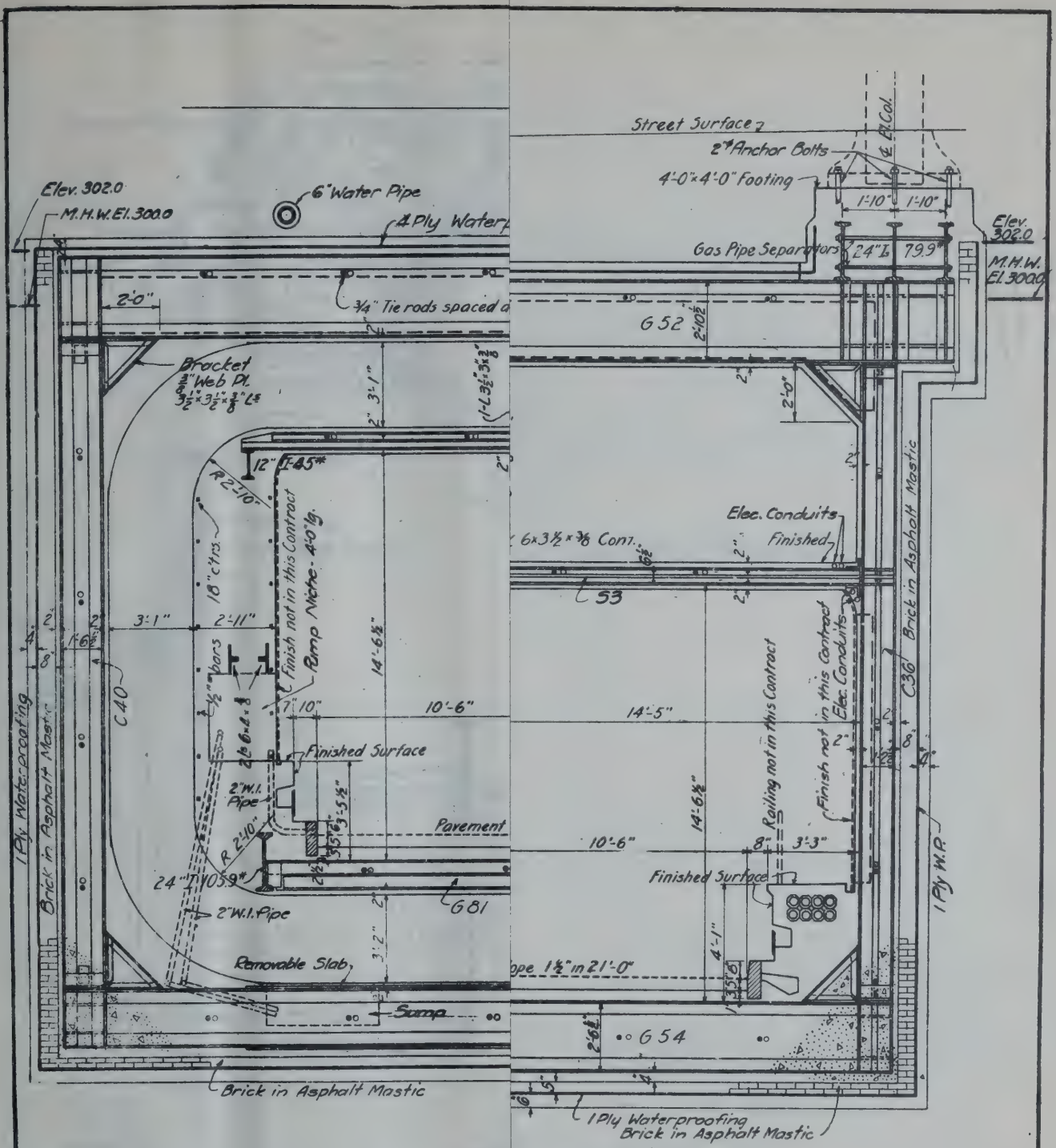
O. H. Ammann
ENGINEER OF DESIGN

C. C. Holland
CHIEF ENGINEER

DRAWN BY [illegible]
CHECKED BY [illegible]

FILE NO. 1-5

J. B. BROWN PRINTING & BINDING CO. N.Y.



CROTION B-B

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 10

SCALE 0 1 2 3 FEET

DATE: APRIL 23, 1925

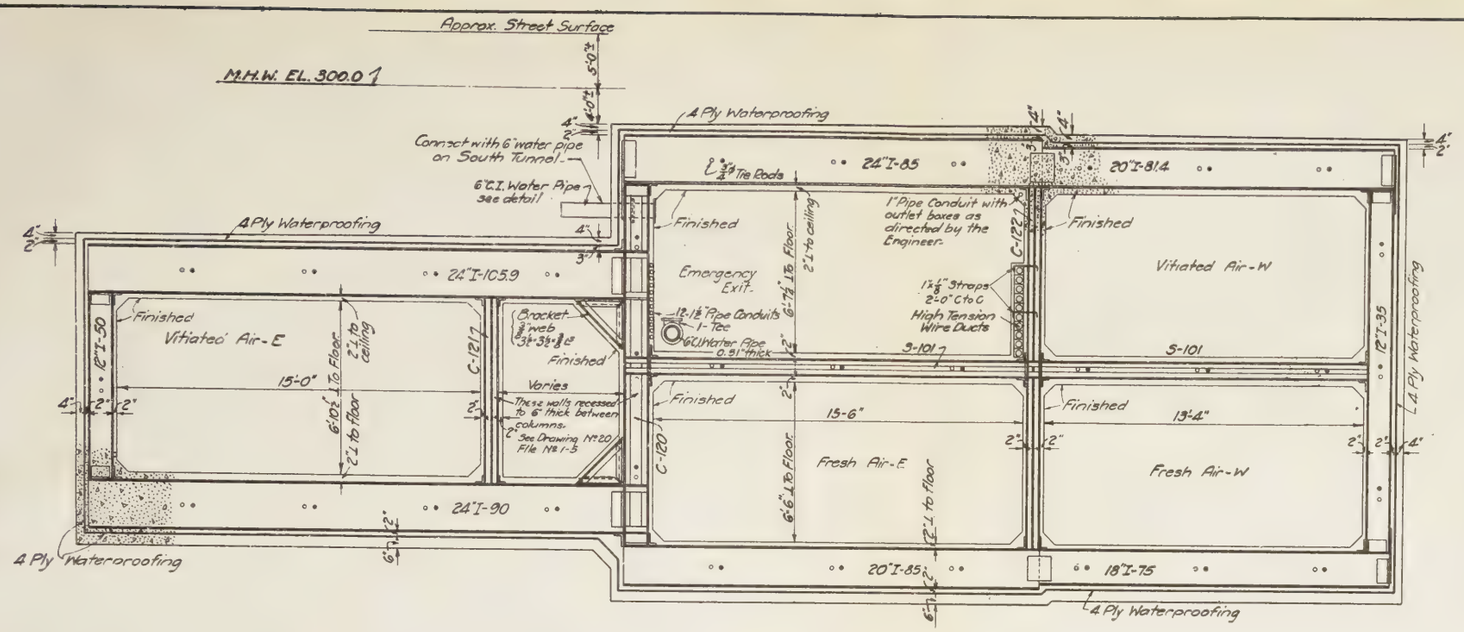
Ole Singstad
ENGINEER OF DESIGNS

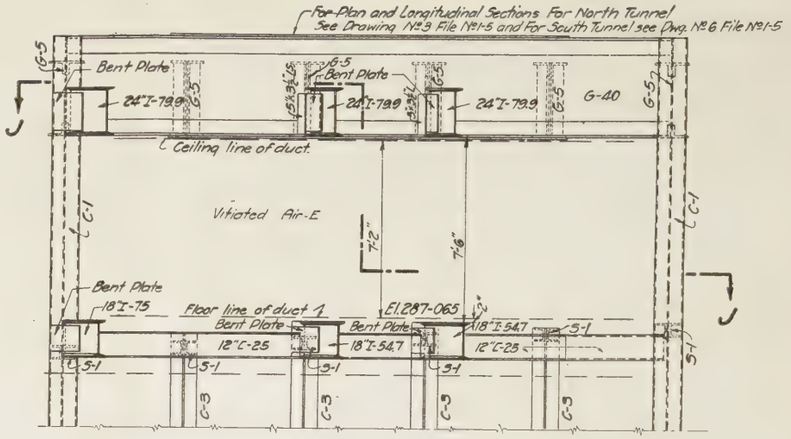
Clifford Holland
CHIEF ENGINEER

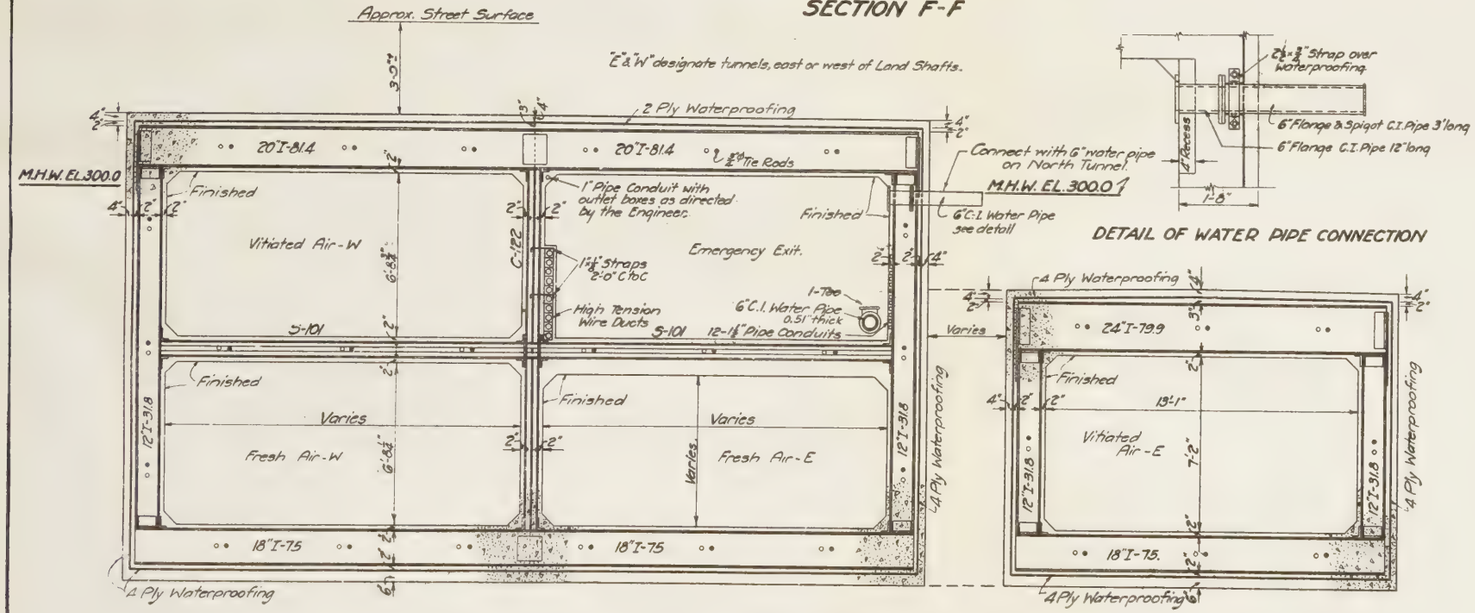
DRAWN BY M.A.
CHECKED BY L.A.F. O.L.Q.

FILE NO. 1-5

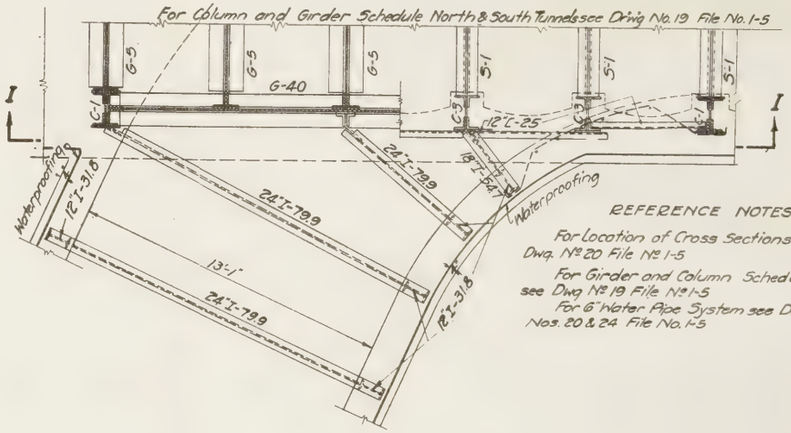
M.B. BROWN PRINTING & BINDING CO. N.Y.







DETAIL OF WATER PIPE CONNECTION


For Column and Girder Schedule North & South Tunnels see Drwg No. 19 File No. 1-5
G-40
24"I-79.9
13'-1"
12"I-31.8
Waterproofing
REFERENCE NOTES
For Location of Cross Sections see Dwg. No 20 File No 1-5
For Girder and Column Schedule see Dwg No 19 File No 1-5
For 6" Water Pipe System see Drwgs. Nos. 20 & 24 File No. 1-5

SECTION J-J

DUCT CONNECTION TO NORTH TUNNEL
(CONNECTION TO SOUTH TUNNEL SIMILAR TO ABOVE)

LAND VENTILATION BUILDING - NEW YORK

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No 5
CONTRACT DRAWING No. 23

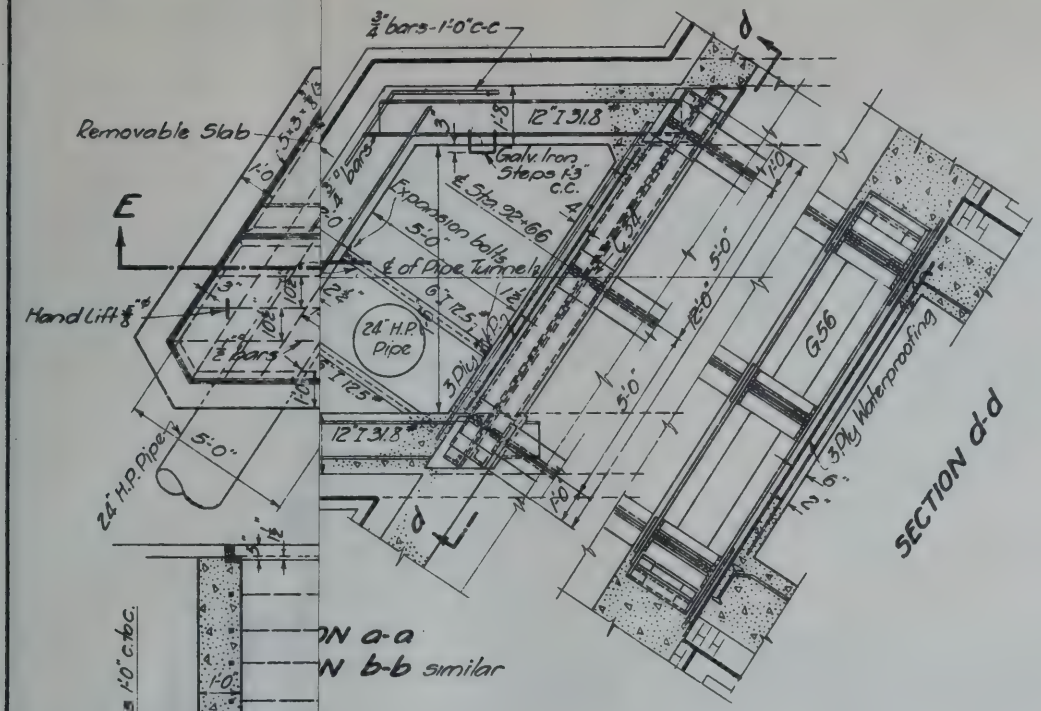
ENGINEER OF DESIGNS

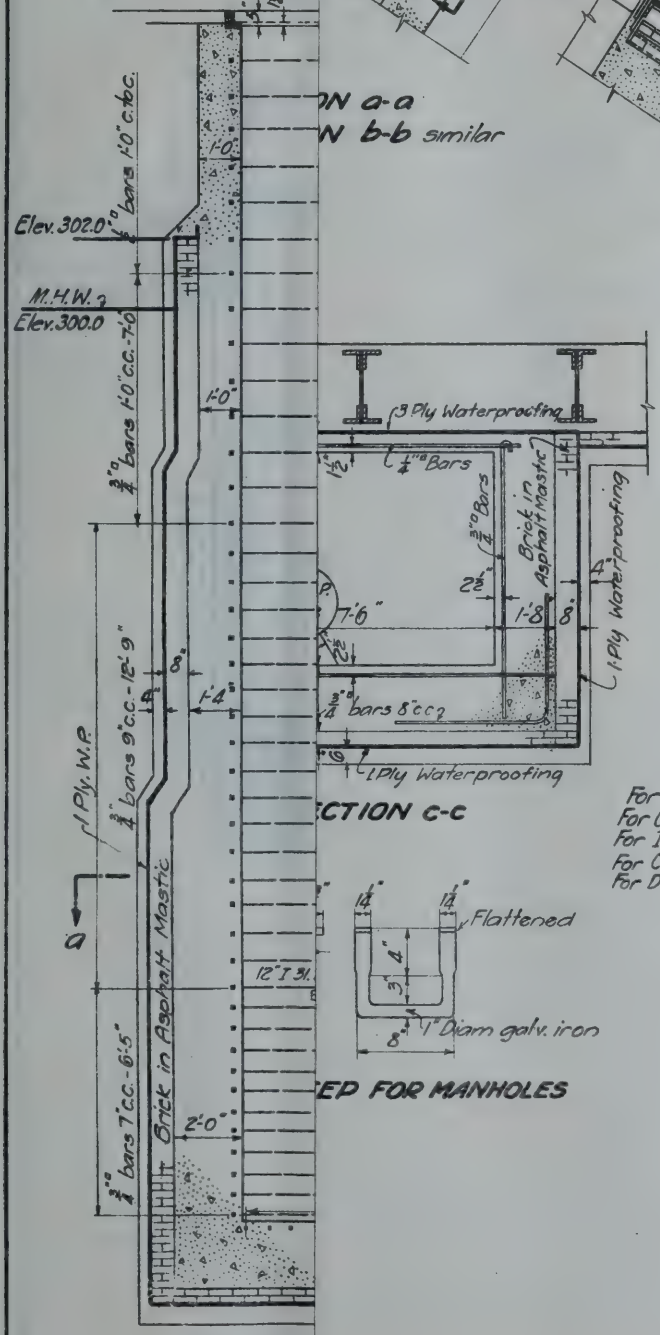
CHIEF ENGINEER

DATE: APRIL 29 1938

DRAWN BY GSS
CHECKED BY A.F. & J.J.

FILE NO 1-8





ON a-a
N b-b similar

CTION c-c

ED FOR MANHOLES

For Plan and Longitudinal Section see drwg No 8 File No 1-5
For Girder and Column Schedules " " " 19 " " 1-5
For Interior Details " " " 14 " " 1-5
For Concrete " " " 15, 16 " " 1-5
For Details of 6" Water Pipe System " " " 13 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 11

SCALE: 0 1 2 3 FEET

DATE: APRIL 23, 1928

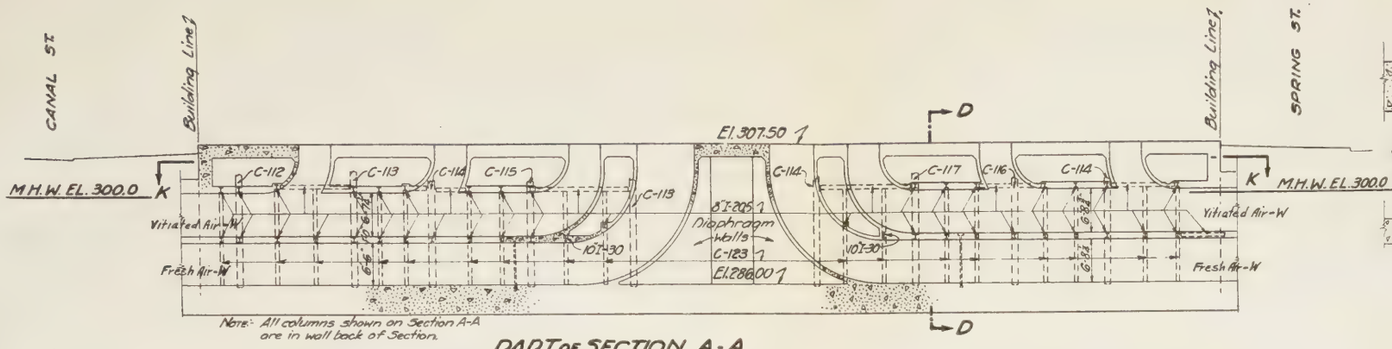
CHIEF ENGINEER

ENGINEER OF DESIGN

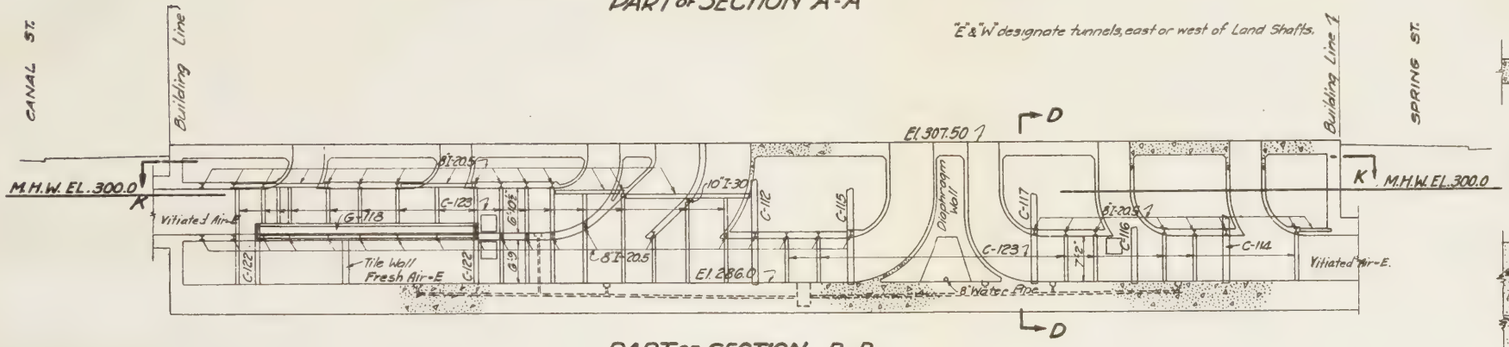
DRAWN BY L.R.S.
CHECKED BY J.E.S. O.F.B.

FILE NO. 1-5

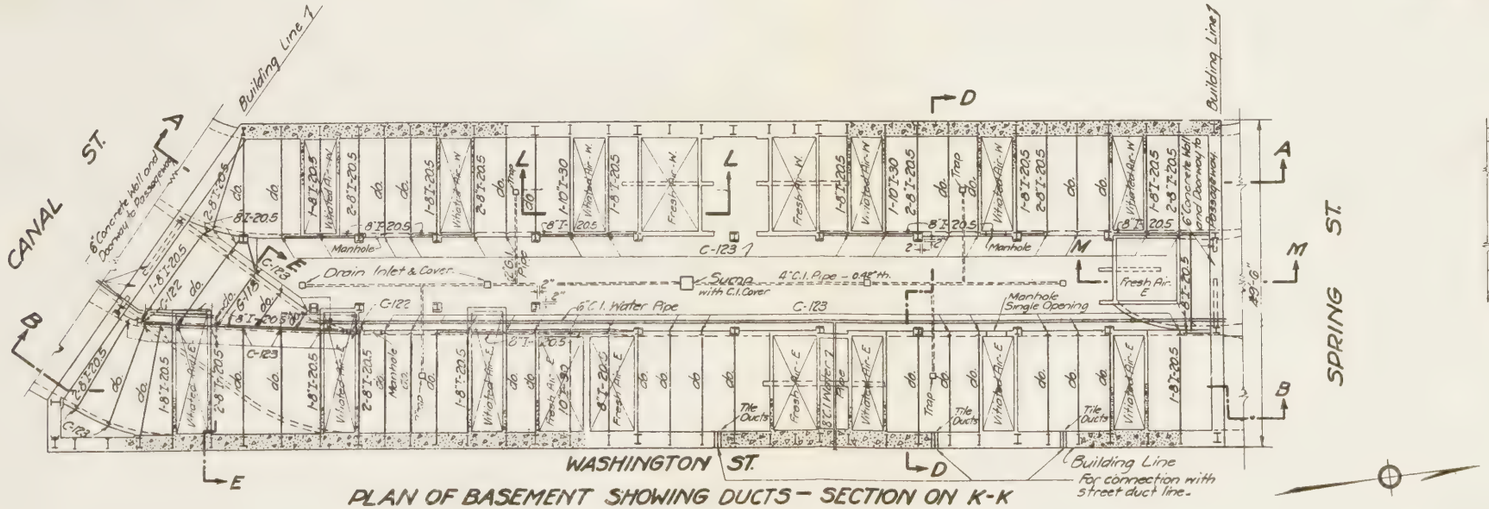
M.B. BROWN PRINTING & BINDING CO. N.Y.



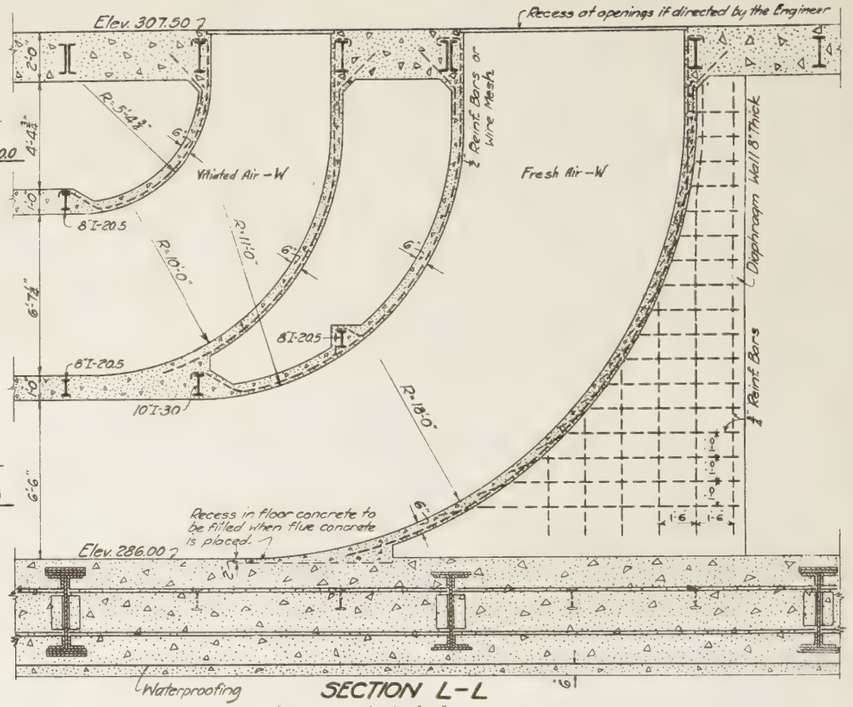
PART OF SECTION A-A



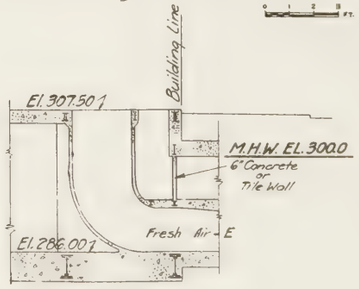
PART OF SECTION B-B



PLAN OF BASEMENT SHOWING DUCTS - SECTION ON K-K



SECTION L-L



SECTION M-M

REFERENCE NOTES

For Location of Cross Sections see Dwg. No. 20 File No. 1-5
For Girder and Column Schedule see Dwg. No. 19 File No. 1-5
For Location of Basement Floor Drainage System see also Dwg's. Nos. 21 & 22 File No. 1-5
For Manhole Details see Dwg. No. 18 File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

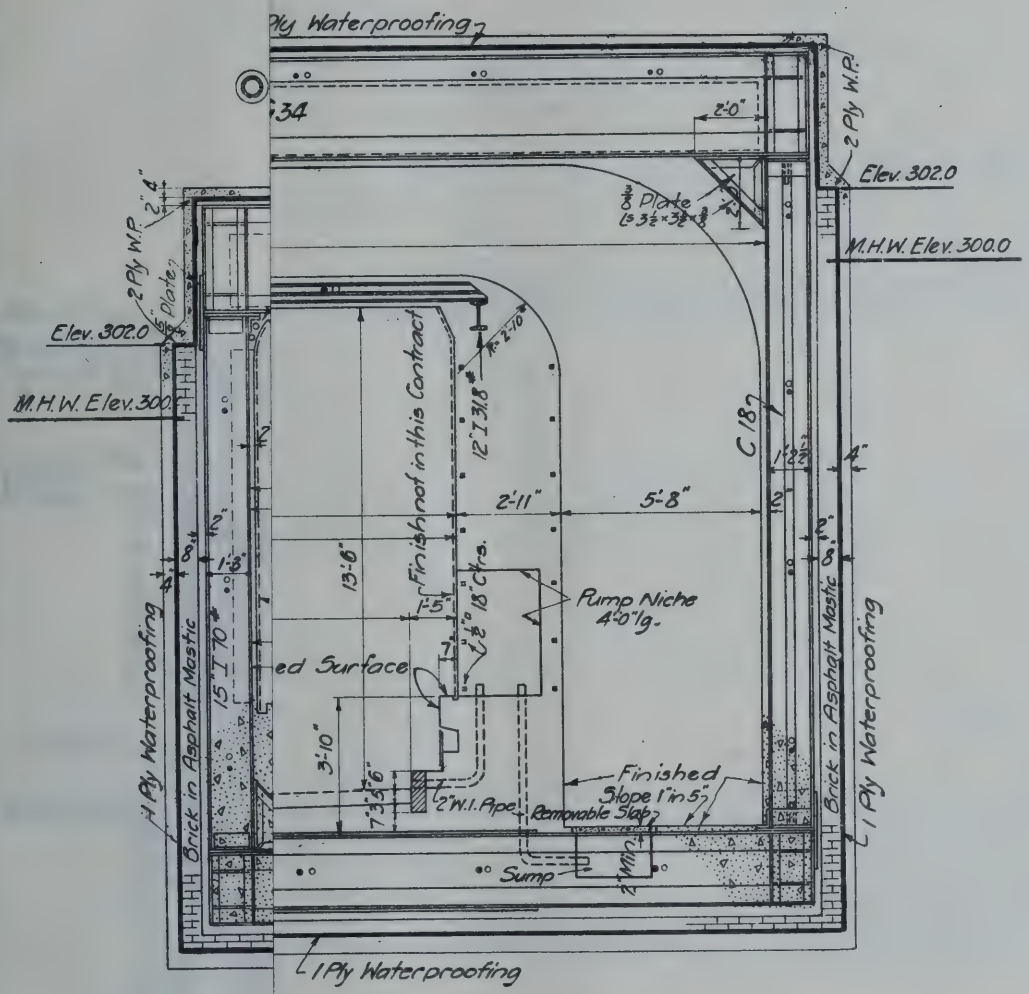
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 24

SCALE: 0 5 10 FT.
DATE: APRIL 29, 1929
DRAWN BY O.S.G.
CHECKED BY J.E.O.G.
CHIEF ENGINEER
FILE NO. 1-5

ENGINEER OF BRIDGES

LAND VENTILATION BUILDING - NEW YORK - AIR DUCTS

M. B. BROWN PRINTING & BINDING CO. N.Y.



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 12

Drwg. No. 4 File No. 1-5
" - 14 - - 1-5
Drngs. Nos. 15-16 - - 1-5
Drwg - 19 - - 1-5
" - 13 - - 1-5

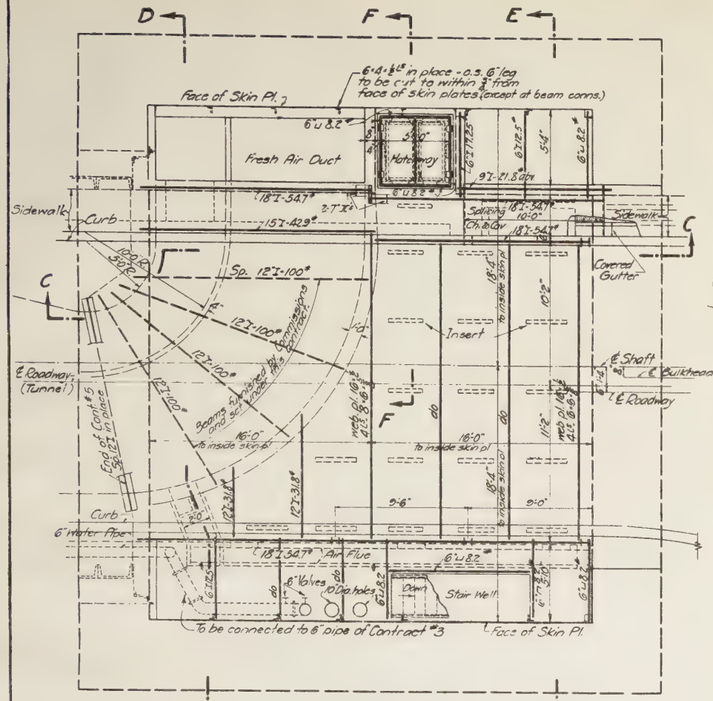
SCALE: 0 1 2 3 FEET

DATE: APRIL 29, 1925

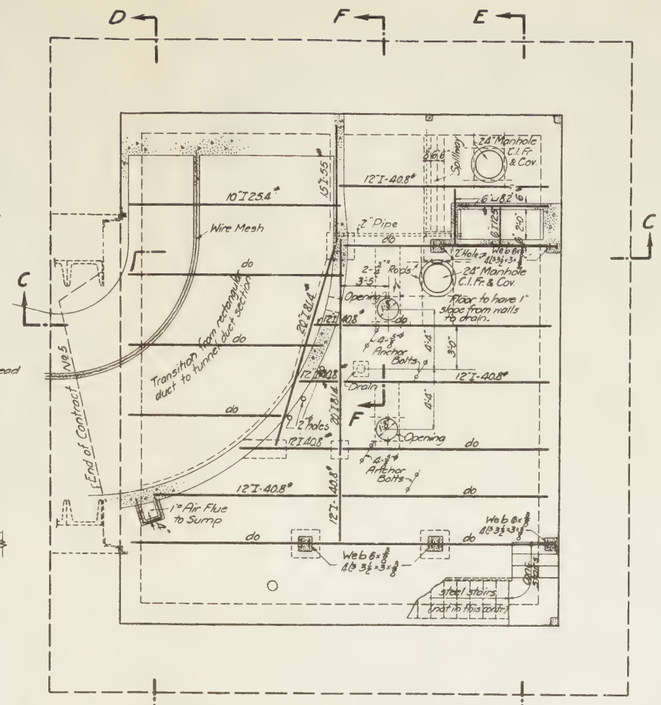
CHIEF ENGINEER

DRAWN BY L.A.F.
CHECKED BY R.S.

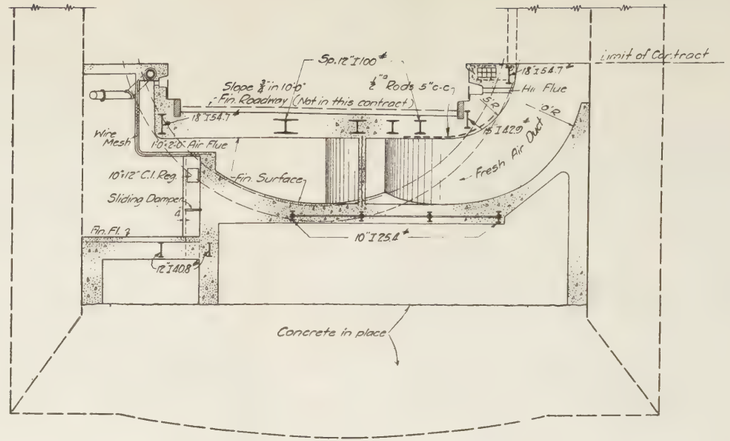
FILE NO. 1-5



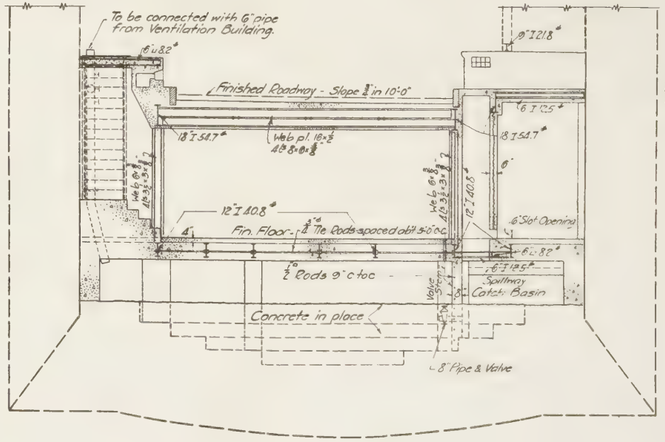
D ← PLAN AT SIDEWALK LEVEL → E



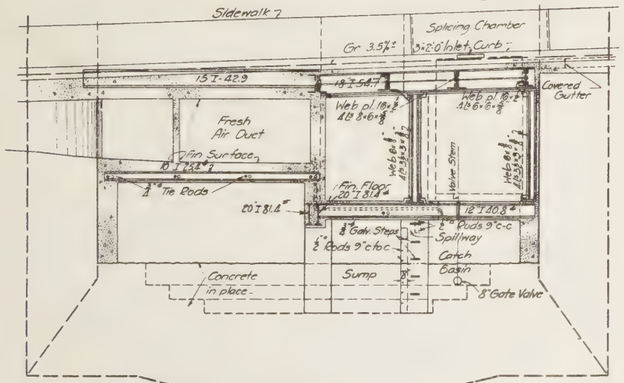
D ← PLAN AT PUMP FLOOR LEVEL → E



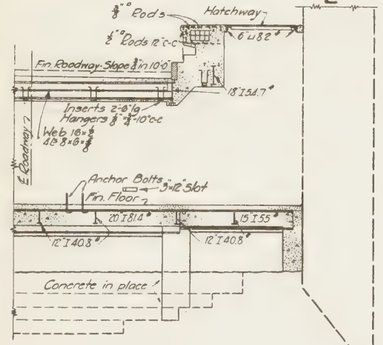
SECTION D-D.


To be connected with 6" pipe from Ventilation Building.
Finished Roadway - Slope ⅜" in 10'-0"
Fin. Floor
⅞" Tie Rods spaced o.f. 9'-0" c.
½" Rods 9" c. to c.
6" Slot Opening
Spillway Catch Basin
Concrete in place
8" Pipe & Valve

SECTION E-E



SECTION C-C



SECTION F-F

SHAFT DETAILS

CANAL ST. SHAFT - AS SHOWN
SPRING ST. SHAFT - OPP. HAND

For Alinement & Profile ..... see Drwg's Nos 1&2 File No 1-5
For Sidewalk & Roadway Details - Drwg No 18 " " 1-5
For Electrical Conduit System " " 31 " " 1-5
For High Tension Duct Splicing Chamber - " " 17 " " 1-5
For 6" Water Pipe System in Ventilation Building ..... see Drwg. No. 20 - File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 25

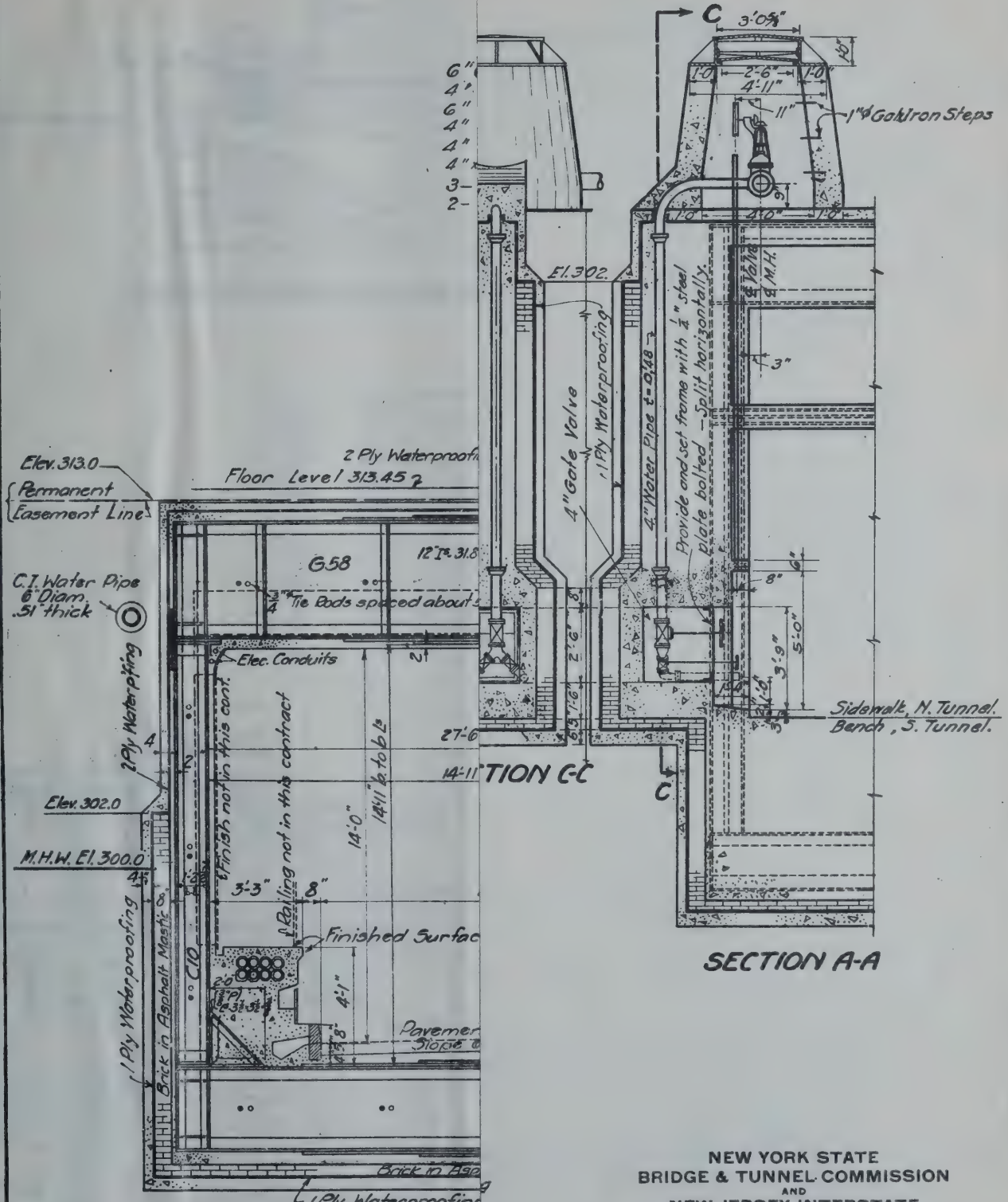
SCALE ——— FEET

DATE April 23, 1923

DRAWN BY L. R. D. - W. B.
CHECKED BY W. S. D.
O.K.

Clifford Holland
CHIEF ENGINEER

FILE NO 1-5



NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 13

SCALE: 0 1 2 FEET

DATE: APRIL 23, 1923

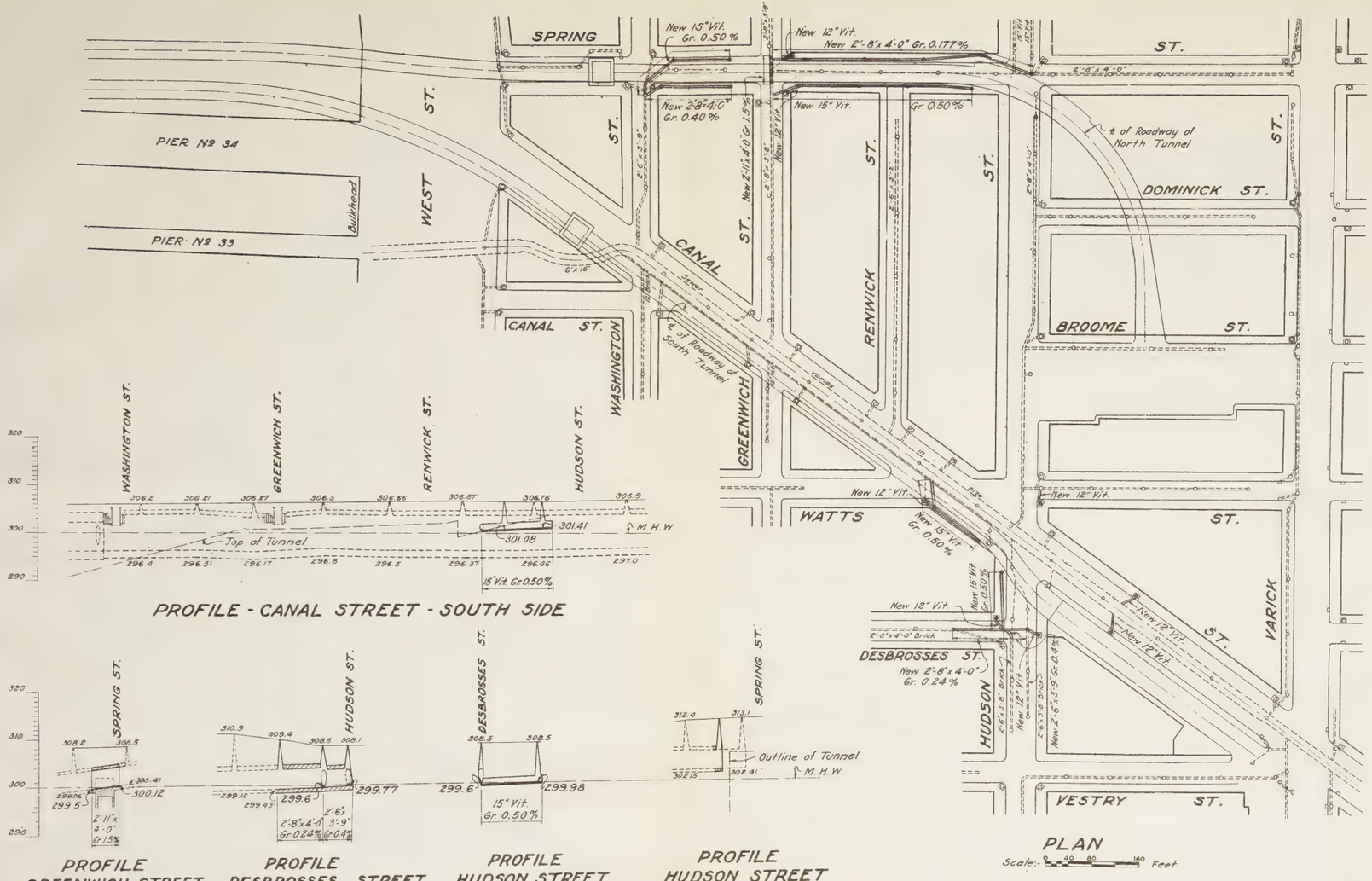
Ole Singstad
ENGINEER OF DESIGNS

DRAWN BY L.A.T. - B.M.
CHECKED BY L.A.T. O.S.B.

Clifford Holland
CHIEF ENGINEER

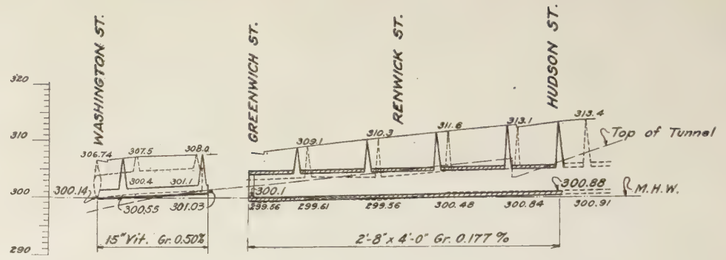
FILE NO. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.

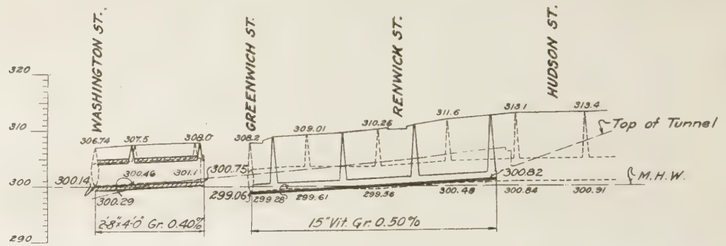


PROFILE - CANAL STREET - SOUTH SIDE

PROFILE GREENWICH STREET | PROFILE DESBROSSES STREET | PROFILE HUDSON STREET | PROFILE HUDSON STREET



PROFILE - SPRING STREET - NORTH SIDE



PROFILE - SPRING STREET - SOUTH SIDE

LEGEND:-
- New sewers
- Existing sewers retained
- Existing sewers abandoned
- New manholes
- New basins
- Existing manholes
- Existing basins

Note:-
All existing sewers which are to be retained, shall be rebuilt if disturbed, and no payment will be made for same unless otherwise specifically provided for in the contract.

For alinement and profile of North tunnel see Drawing No. 1, File No. 1-5
For alinement and profile of South tunnel see Drawing No. 2, File No. 1-5
For details of Inlets, Basins, Manholes and Sewers see Drawing No. 27, File No. 1-5
For details of Cast Iron for Inlets, Basins and Manholes see Drawing No. 28, File No. 1-5

PLAN OF SEWER CONSTRUCTION

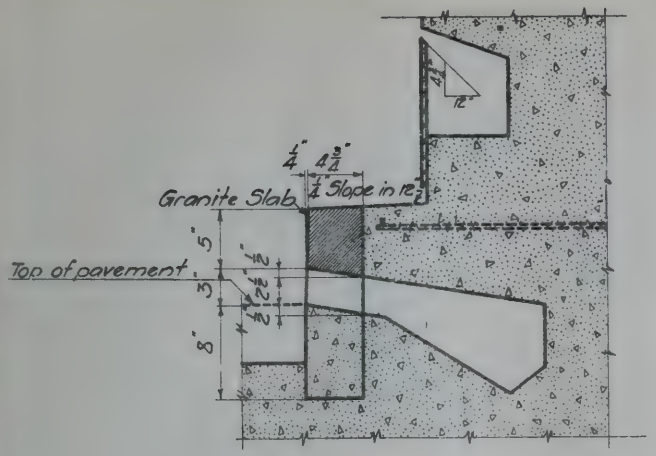
O. L. Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

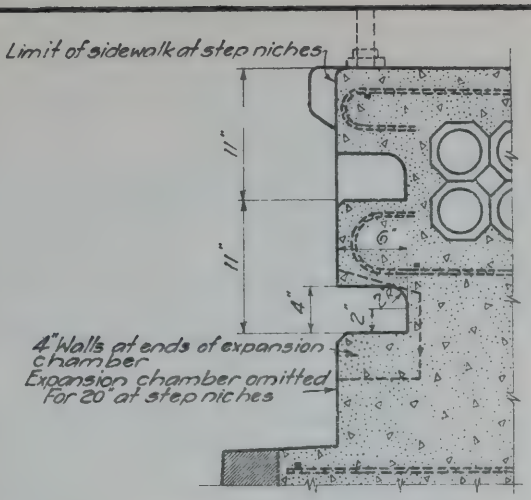
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 26

SCALE AS SHOWN
DATE APRIL 23, 1923.
DRAWN BY C.E.L. - W.C.B.
CHECKED BY
CHIEF ENGINEER
FILE No. 1-5

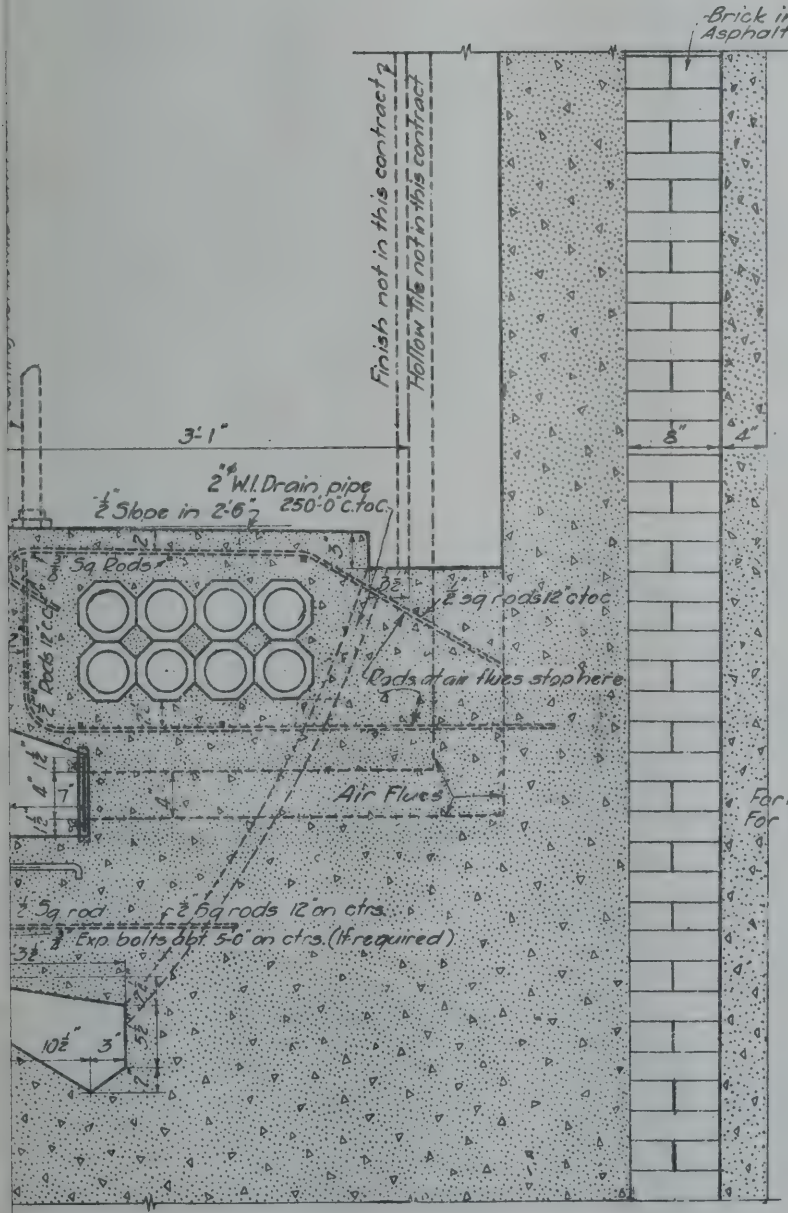
M. B. BROWN PRINTING & BINDING CO., N.Y.

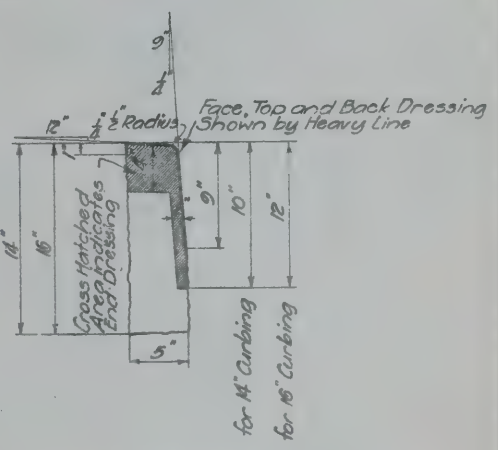


CROSS SECTION AT GUTTER INLET



CROSS SECTION AT STEP NICHES
Step niches spaced every 240'


Brick in Asphalt Mastic
Finish not in this contract
Hollow tile not in this contract
2" W.I. Drain pipe
Slope in 2'-6" 250'-0" c. to c.
Sq Rods
Rods at air flues stop here
Air Flues
Sq rod
Sq rods 12" on ctrs.
Exp. bolts abt 5'-0" on ctrs. (If required)



CURB DRESSING

For Plans and Sections see drwgs No 3-13 incl File No 15
For Concrete Details " " " 15-16 " " "

TION AT SIDEWALK

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 14

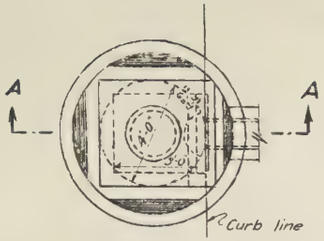
SCALE: 0 3 6 9 12 INCHES DATE APRIL 25, 1928

CHIEF ENGINEER

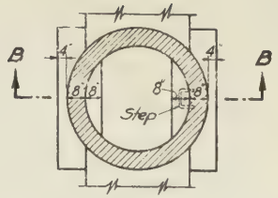
DRAWN BY B.G.
CHECKED BY W.K.
Q.L.B.

FILE NO. 1-5

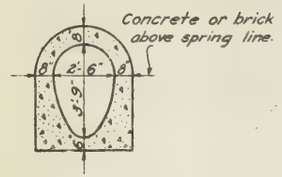
M.E. BROWN PRINTING & BINDING CO., N.Y.



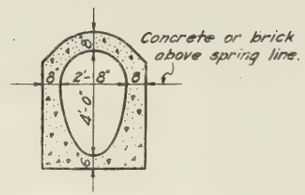
PLAN



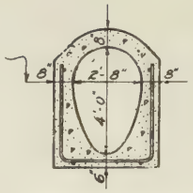
SECTION C-C



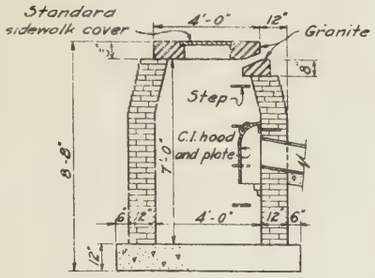
HUDSON STREET



SPRING STREET AND DESBROSSES STREET

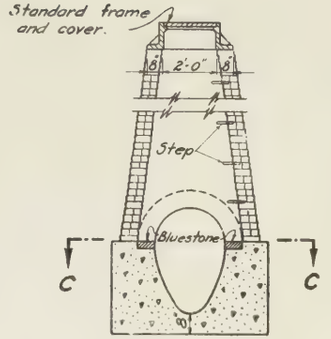


ALTERNATE SECTION IN SPRING STREET
To be used where required by the Engineer.



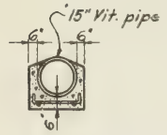
SECTION A-A

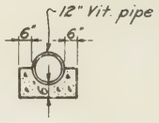
STANDARD RECEIVING BASIN



SECTION B-B

STANDARD MANHOLE

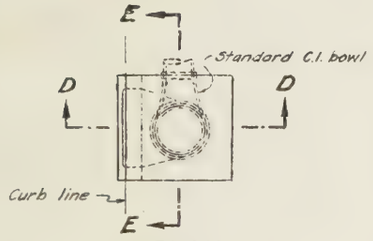




TYPICAL SEWER SECTIONS

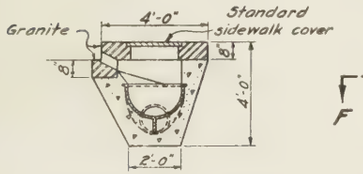
For Plan of Sewer Construction see Drawing No.26, File No. 1-5
For Details of Cast Iron for Inlets, Basins and Manholes see Drawing No.28, File No. 1-5

Note:-
Interior and exterior walls of basins, and exterior surfaces of manhole walls and brick sewer arches to be plastered with cement mortar ½" thick.

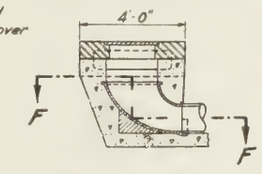


PLAN

SECTION F-F

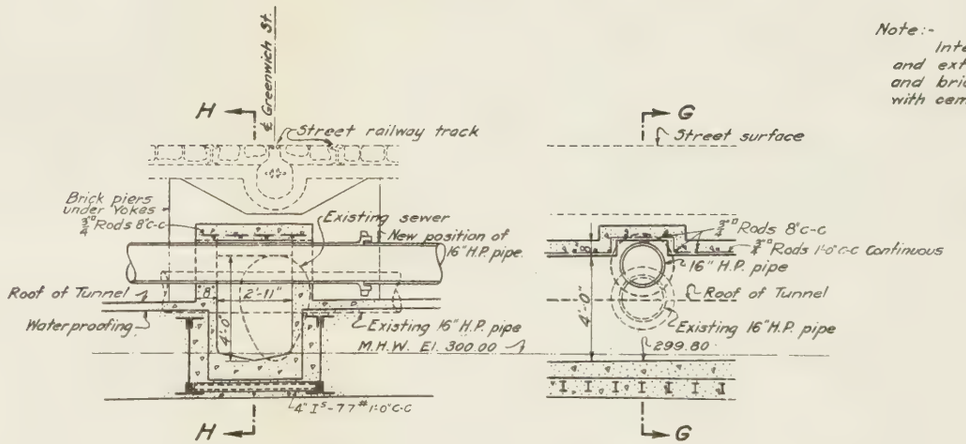


SECTION D-D



SECTION E-E

STANDARD INLET



SECTION G-G

SECTION H-H

GREENWICH STREET SEWER

SEWER DETAILS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 27

SCALE: 0 1 2 FEET

DATE: APRIL 29, 1929

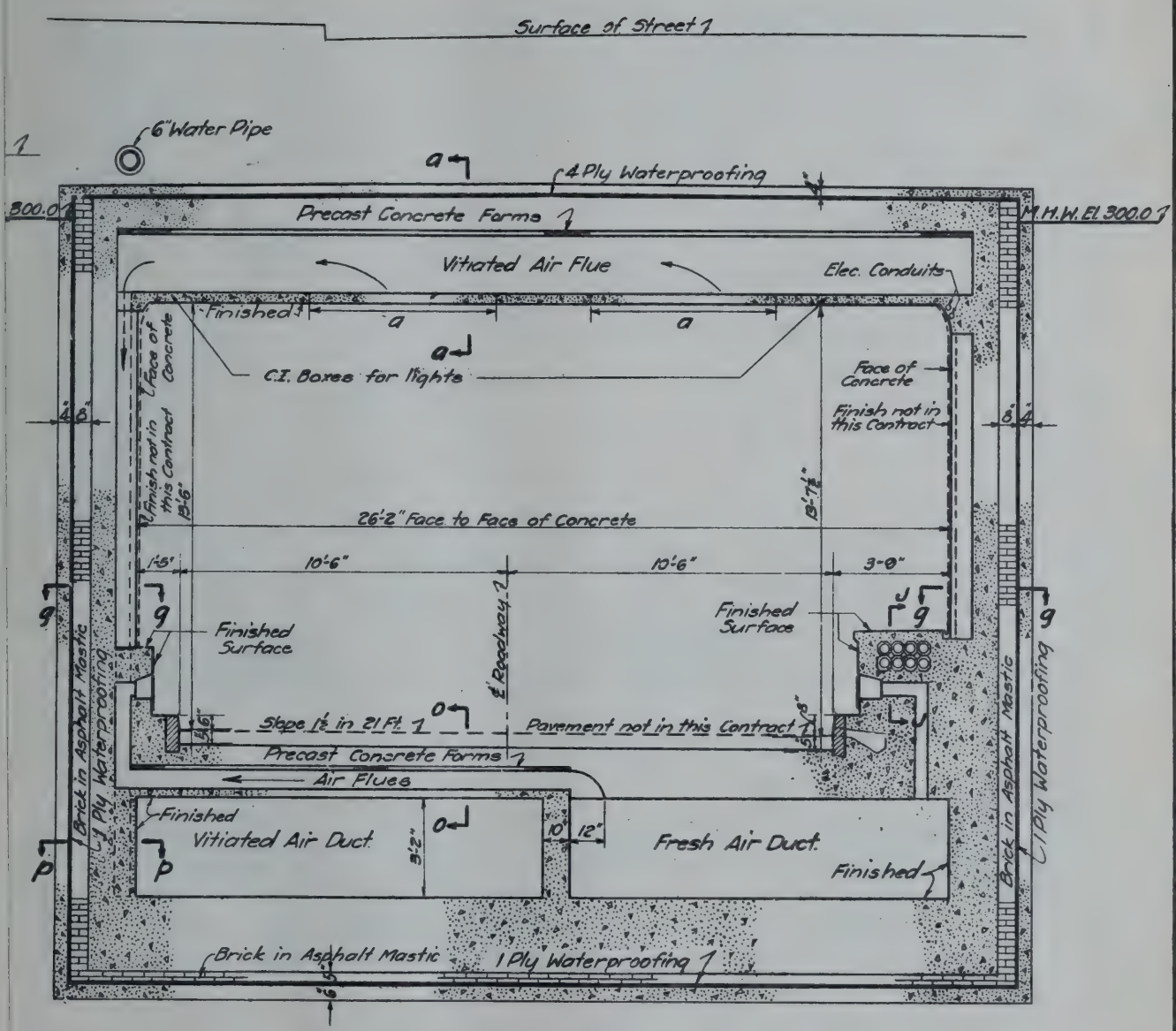
DRAWN BY C.E.Y. - W.C.S.
CHECKED BY

FILE No. 1-5

ENGINEER OF DESIGNS

CHIEF ENGINEER

M B BROWN PRINTING & BINDING CO. N.Y.



CROSS SECTION AIR DUCTS ON BOTTOM

SOUTH TUNNEL

REFERENCE NOTES

For Sections see Dwg. No. 16
File No. 1-5
For Interior Details see Dwg No. 14
File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 15

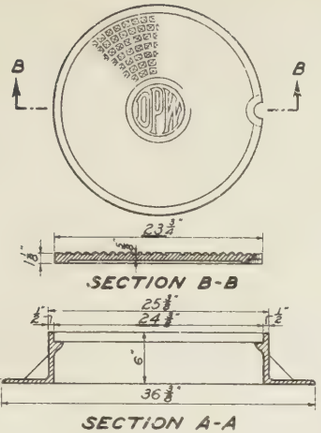
SCALE: 0 1 2 3 FEET

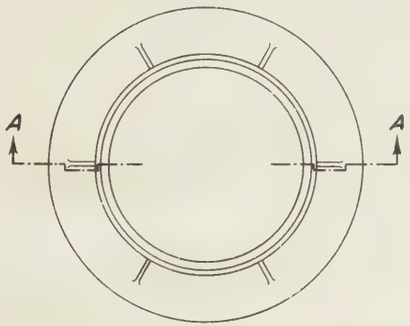
DATE APRIL 23, 1923

CHIEF ENGINEER

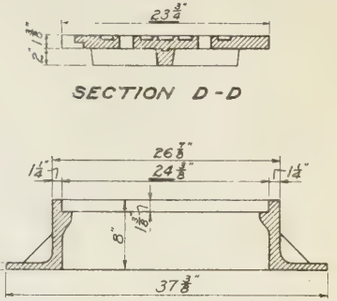
DRAWN BY L.A.J.
CHECKED BY L.R.S.
O.F.B.

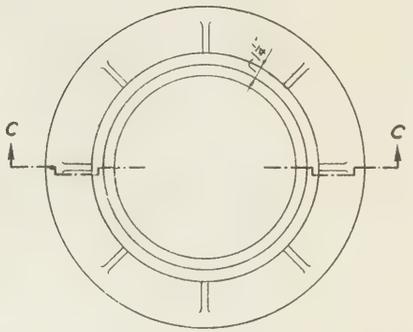
FILE NO. 1-5



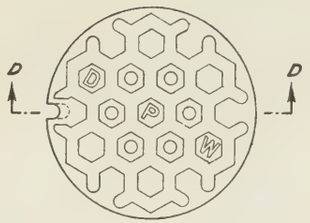


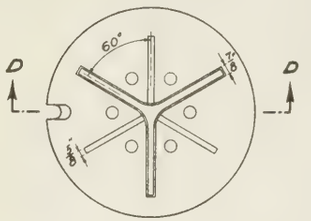
STANDARD FRAME AND COVER
FOR SIDEWALK MANHOLES AND RECEIVING BASINS

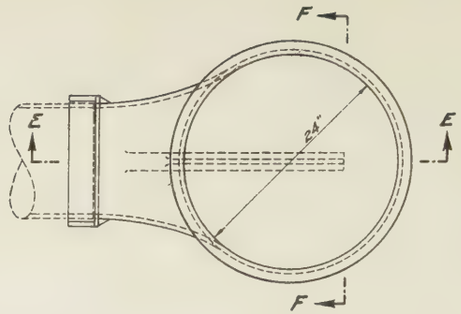


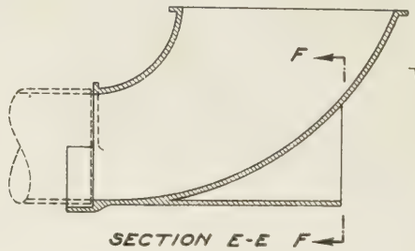


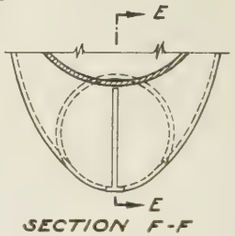
STANDARD FRAME AND COVER
FOR ROADWAY MANHOLES



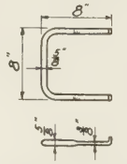




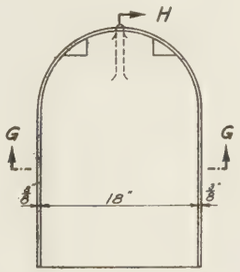




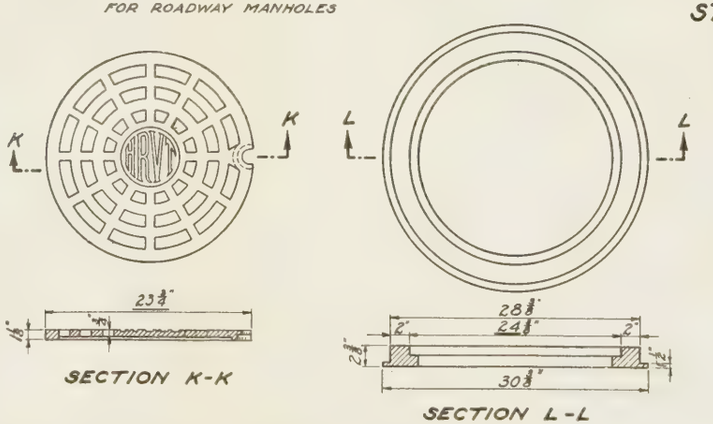
STANDARD BOWL
FOR INLET BASINS



STANDARD WROUGHT IRON STEP



STANDARD HOOD AND PLATE
FOR RECEIVING BASINS



SPECIAL FRAME AND COVER
FOR RECEIVING BASINS

For Plan of Sewer Construction see Drawing No. 26, File No. 1-5
For Details of Inlets, Basins and Manholes
see Drawing No. 27, File No. 1-5

CAST IRON SEWER DETAILS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 28

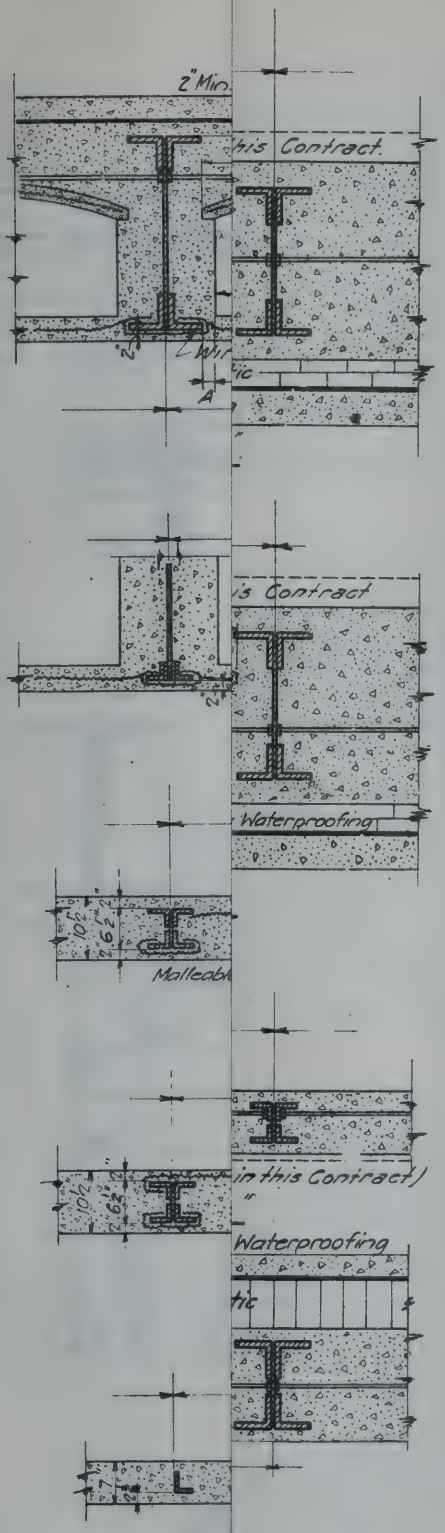
SCALE: 0 3 6 9 12 INCHES DATE: APRIL 29, 1925

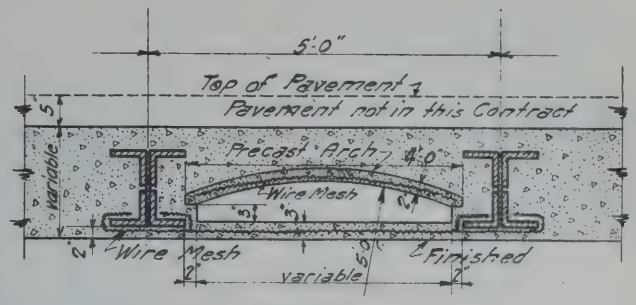
Otto Singstad
ENGINEER OF DESIGNS

Ole Singstad
CHIEF ENGINEER

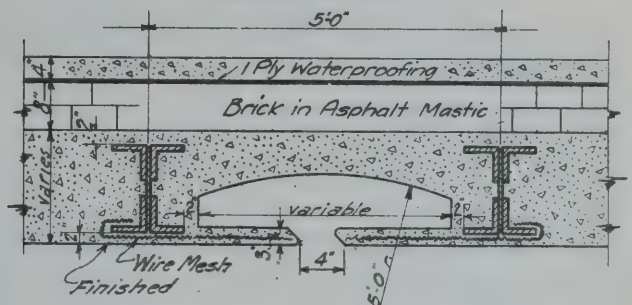
DRAWN BY C.E.J. - W.C.S.
CHECKED BY J.O.S.

FILE NO. 1-5

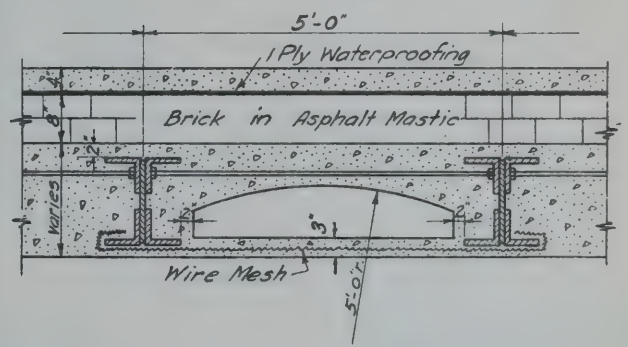




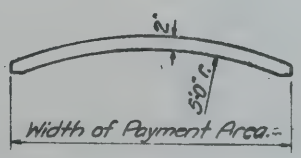
Section: "o-o"



Section: "p-p"



Section: "q-q"



Payment Area for Precast Concrete Form.

No. 15. File No. 1-5.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 16

0 3 6 9 12 INCHES

DATE: APRIL 28, 1929

Ole Singstad
ENGINEER OF DESIGNS

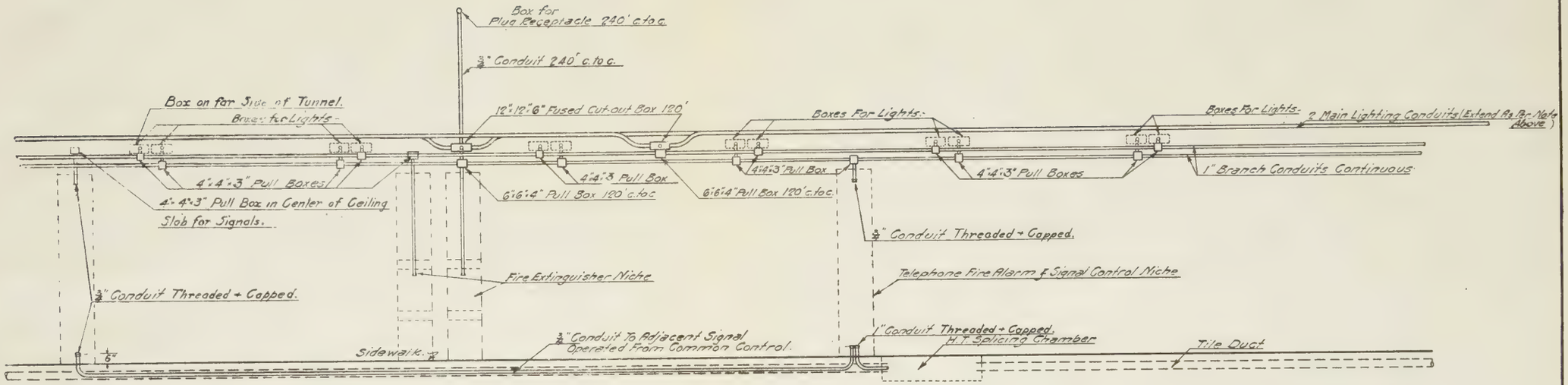
DRAWN BY BAS
CHECKED BY L.B.S.

Clifford Holland
CHIEF ENGINEER

FILE NO. 1-5

	NORTH TUNNEL		SOUTH TUNNEL	
	Spacing	From Sta. To Sta.	Spacing	From Sta. To Sta.
Boxes for Lights	20'	" 84+93-90+36	20'	" 83+62-93+81
" " "	15'	" 90+36-92+36		
" " "	10'	" 92+36-94+43		
	Size	From Sta. To Sta.	Size	From Sta. To Sta.
Main Lighting Conduits	1 inch	84+93-94+43	1½ inches	83+62-90+36

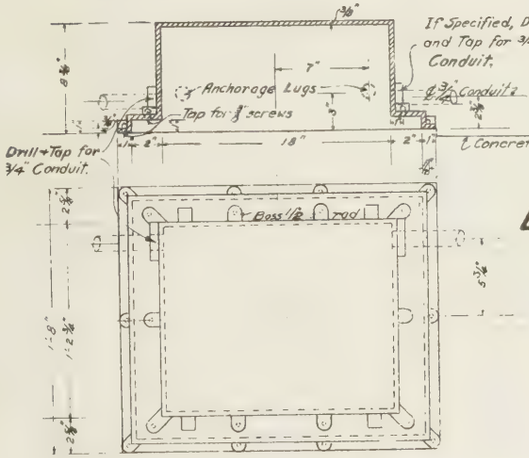
For Spacing of Niches for Fire Extinguisher, Fire Alarm, Telephone - Signal Control See Drawing No. 14. File No. 1-5


Box for Plug Receptacle 240' c.to c.
¾" Conduit 240' c.to c.
Box on far Side of Tunnel.
Boxes for Lights -
12"x12"x6" Fused Cut-out Box 120'
Boxes For Lights -
Boxes For Lights -
2 Main Lighting Conduits (Extend Re Par Note Above)
4'-4"x3" Pull Boxes
4'-4"x3" Pull Box in Center of Ceiling Slab for Signals.
6'-6"x4" Pull Box 120' c.to c.
4'-4"x3" Pull Box
6'-6"x4" Pull Box 120' c.to c.
4'-4"x3" Pull Box
4'-4"x3" Pull Boxes
1" Branch Conduits Continuous
¾" Conduit Threaded + Capped.
¾" Conduit Threaded + Capped.
Fire Extinguisher Niche
Telephone Fire Alarm & Signal Control Niche
Sidewalk
¾" Conduit To Adjacent Signal Operated From Common Control.
1" Conduit Threaded + Capped.
H.T. Splicing Chamber
Tile Duct

ELEVATION SIDEWALK SIDE OF TUNNEL

SCALE HOR. 1 2 3 4 FEET
VERT 1 2 FEET

For Cross Sections of Electrical Conduit System see Dwg. No 30 File No 1-5
For Alinement and Profile see Dwg. No 132 File No 1-5


If Specified, Drill and Tap for ¾" Conduit.
Anchorage Lugs
Tap for ⅜ screws
¾" Conduits
℄ Concrete Line
Drill + Tap for ¾" Conduit.
Boss ½" rad

ELECTRICAL CONDUIT SYSTEM

DETAIL OF C.I. LIGHT BOX
(Supplied without Cover)

SCALE 0 3 6 9 12 INCHES.

Ole Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 29

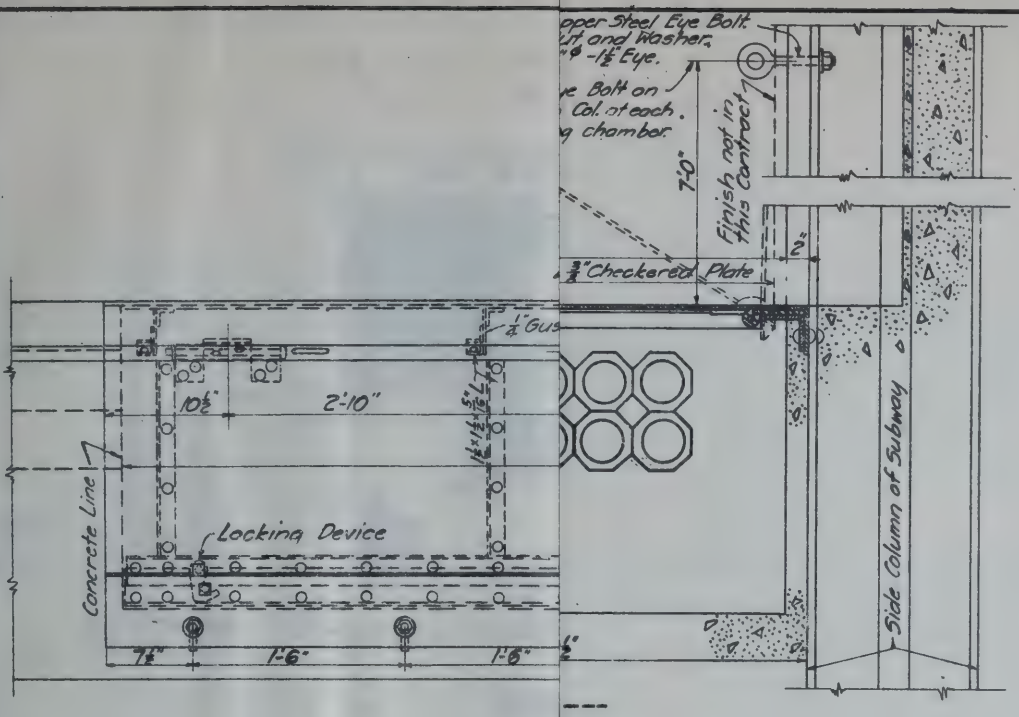
SCALE AS INDICATED. DATE APRIL 28, 1939

DRAWN BY NYC
CHECKED BY JNB.

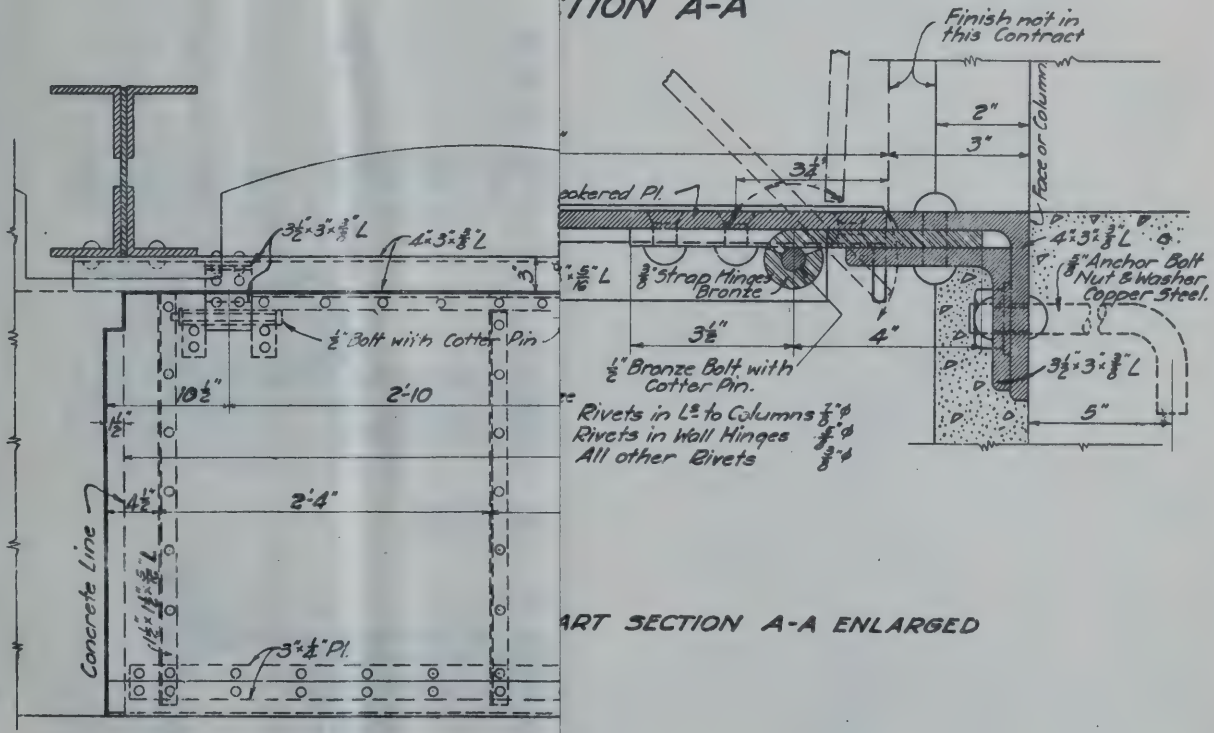
Clifford Holland
CHIEF ENGINEER

FILE NO. 1-5

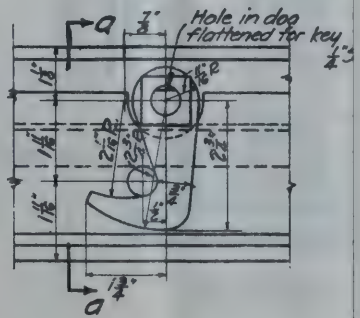
M. E. BROWN PRINTING & BINDING CO. N.Y.



TION A-A



ART SECTION A-A ENLARGED



DETAIL OF LOCKING DEVICE

Ch. Engstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 17

SCALE: 0 5 10 INCHES / 0 1 2 INCHES

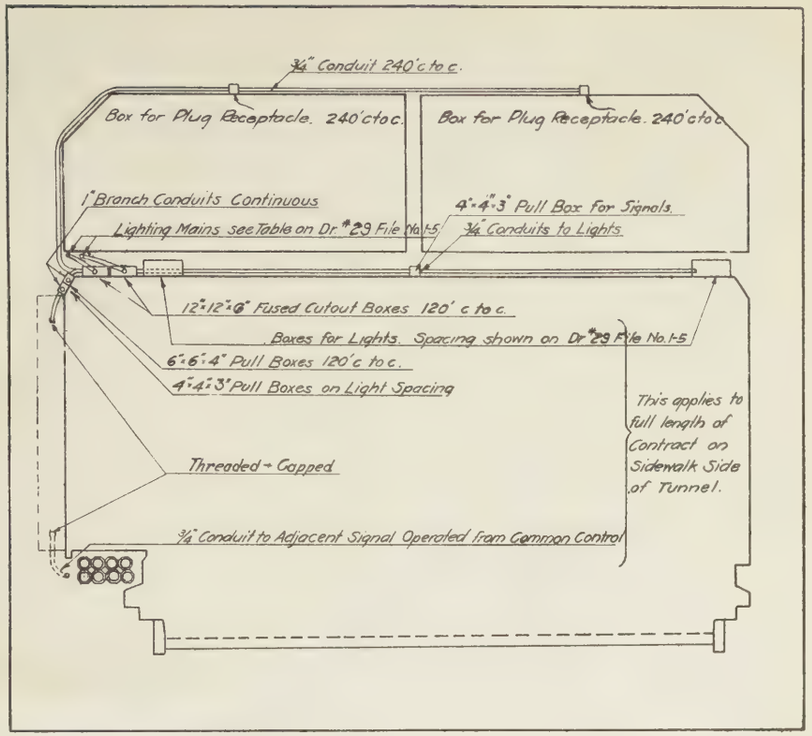
DATE: APRIL 23, 1923

Ole Singstad
CHIEF ENGINEER

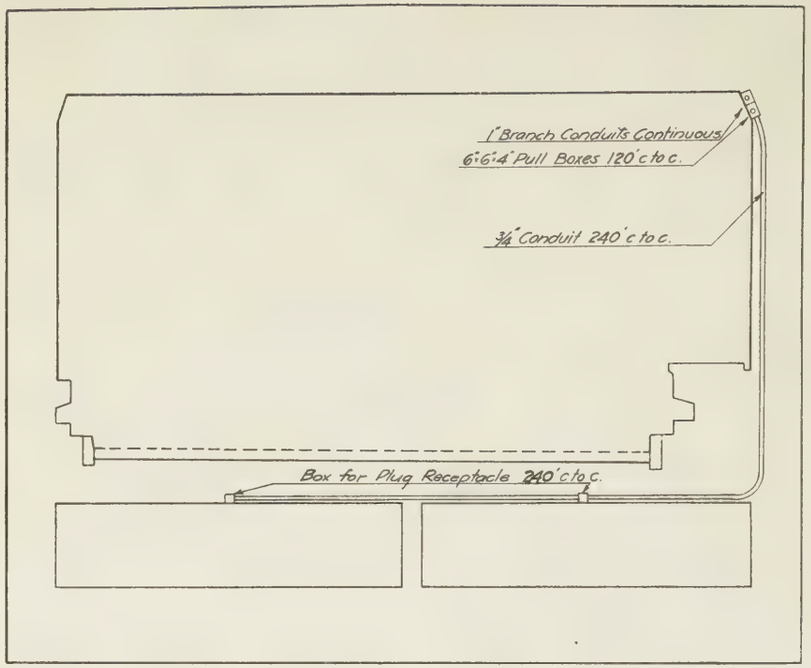
DRAWN BY O.F.D.
CHECKED BY L.A.I. O.F.D.

FILE NO. 1-5

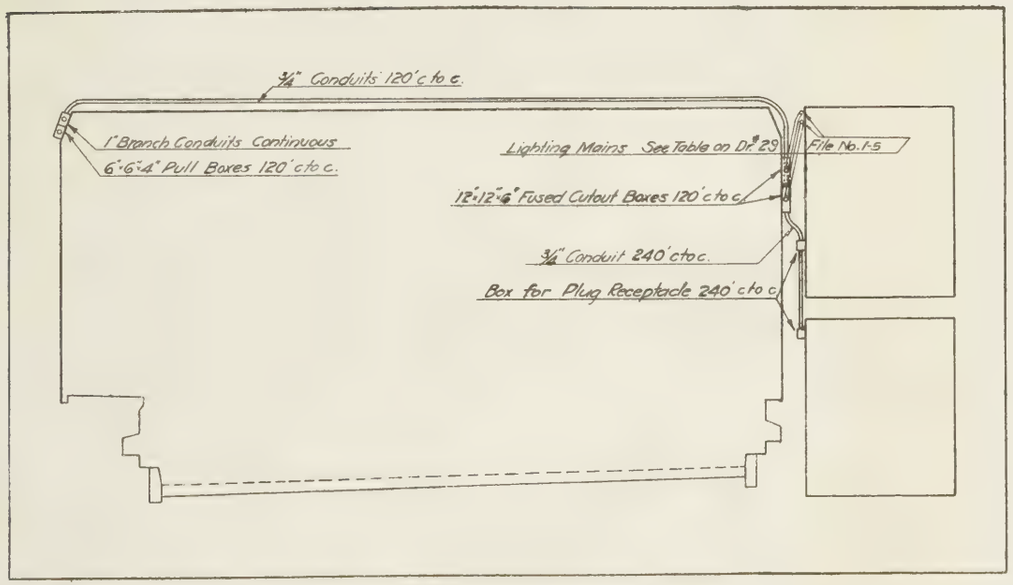
M.E. BROWN PRINTING & BINDING CO. N.Y.


¾" Conduit 240' c to c.
Box for Plug Receptacle. 240' c to c.
Box for Plug Receptacle. 240' c to c.
1" Branch Conduits Continuous
Lighting Mains see Table on Dr. #29 File No. 1-5
4"-4"-3" Pull Box for Signals.
¾" Conduits to Lights.
12"-12"-6" Fused Cutout Boxes 120' c to c.
Boxes for Lights. Spacing shown on Dr. #29 File No. 1-5
6"-6"-4" Pull Boxes 120' c to c.
4"-4"-3" Pull Boxes on Light Spacing
This applies to full length of Contract on Sidewalk Side of Tunnel.
Threaded + Capped
¾" Conduit to Adjacent Signal Operated from Common Control

CROSS SECTION AIR DUCTS ON TOP



CROSS SECTION AIR DUCTS ON BOTTOM


¾" Conduits 120' c to c.
1" Branch Conduits Continuous
6"-6"-4" Pull Boxes 120' c to c.
Lighting Mains See Table on Dr. #29
File No. 1-5
12"-12"-6" Fused Cutout Boxes 120' c to c.
¾" Conduit 240' c to c.
Box for Plug Receptacle 240' c to c.

CROSS SECTION AIR DUCTS ON SIDE

For Electrical Conduit System see Dwg. N° 29 File N° 1-5.
For Alinement and Profile see Dwg. N° 182 File N° 1-5.

ELECTRICAL CONDUIT SYSTEM

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 30

SCALE: 0 1 2 3 FEET

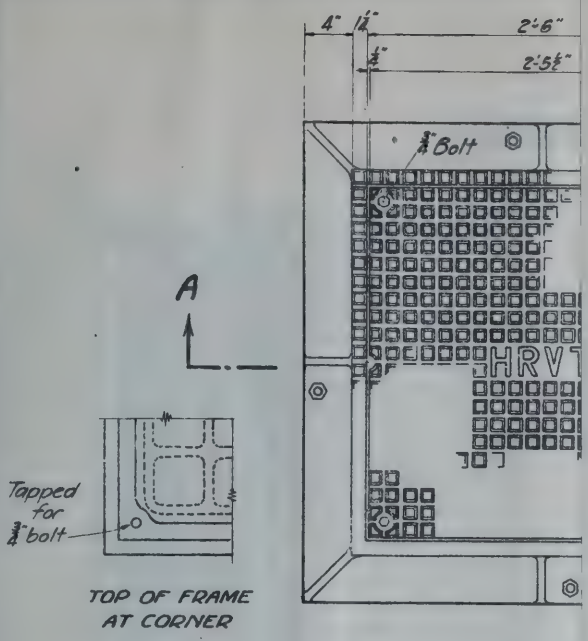
DATE APRIL 23, 1929

DRAWN BY JJGC.
CHECKED BY G.N.B.

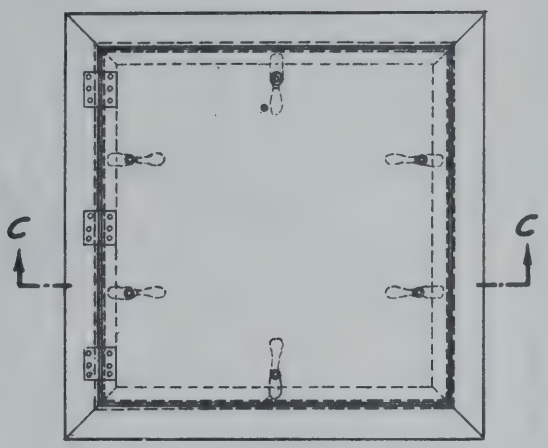
CHIEF ENGINEER

ENGINEER OF DESIGNS

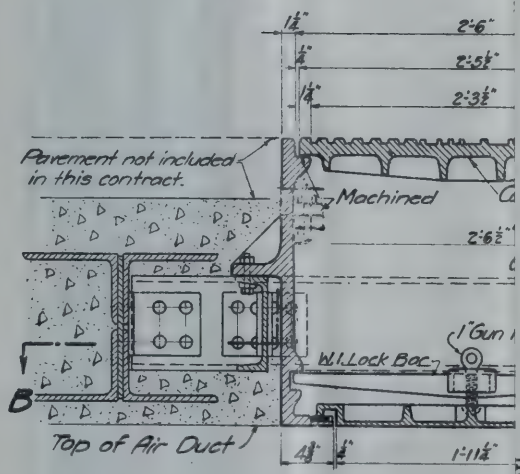
FILE NO. 1-5



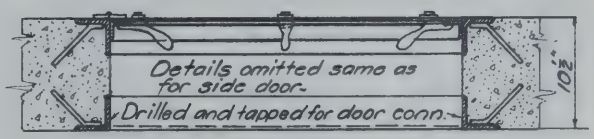
PLAN



PLAN



SECTION

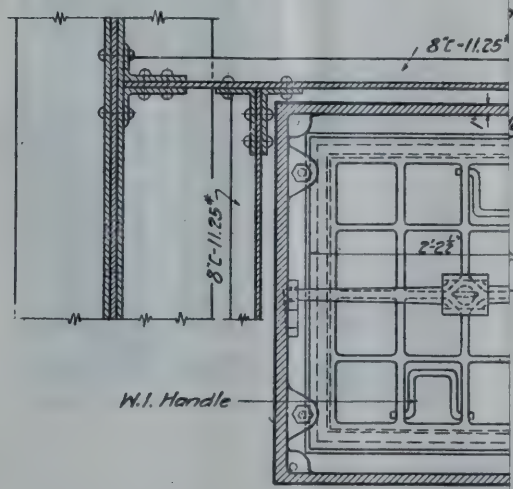


SECTION C-C

MANHOLE FRAME & COVER

For Top Air Duct.
12 Required

For Plans & Sections see Drwgs. Nos. 3-13 incl. File No. 1-5
For Interior Details " Drwg. No. 14 " " 1-5
For Concrete Details " Drwgs. Nos. 15-16 " " 1-5
For Location of Manholes " Drwg No. 32 " " 1-5



SECTION

MANHOLE FRAME

For Bottom Air
2 Required at C.L. Sta
2 " " C.L. Sta

Ole Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 18

SCALE: 0 3 6

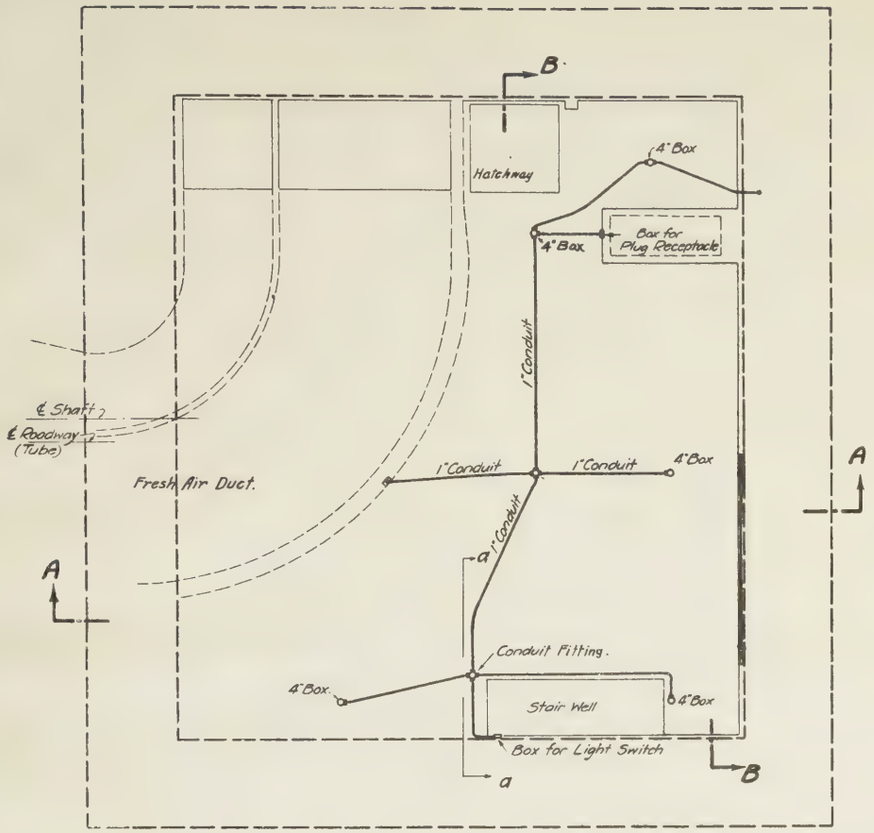
DATE: APRIL 25, 1923

Clifford Holland
CHIEF ENGINEER

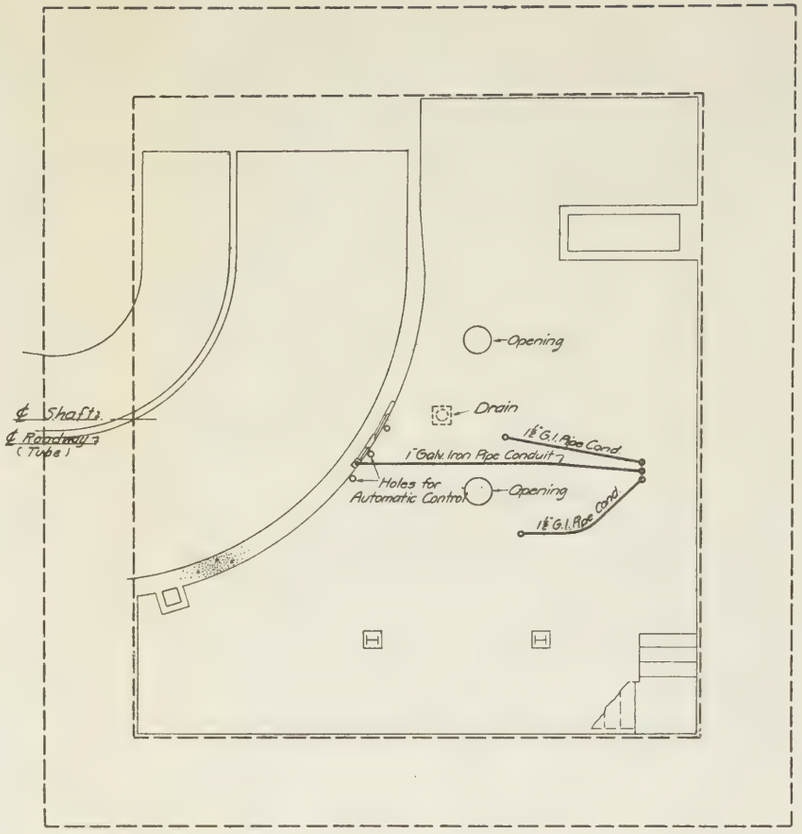
DRAWN BY L.R.L.
CHECKED BY L.A.T. O.S.G.

FILE NO. 1-5

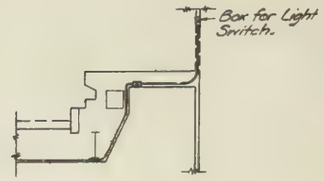
M.B. BROWN PRINTING & BINDING CO., N.Y.



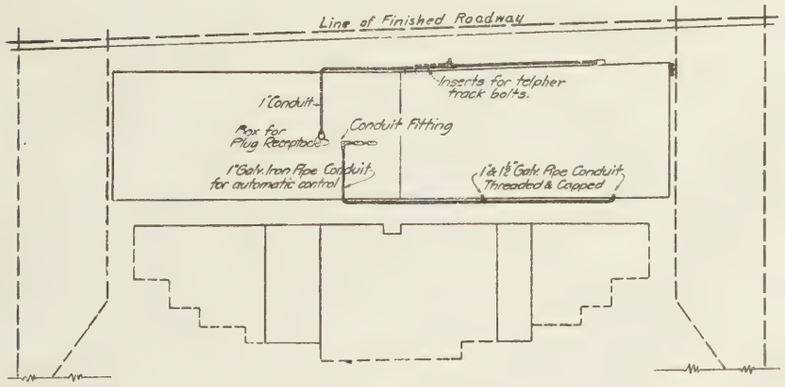
PLAN OF PUMP ROOM CEILING



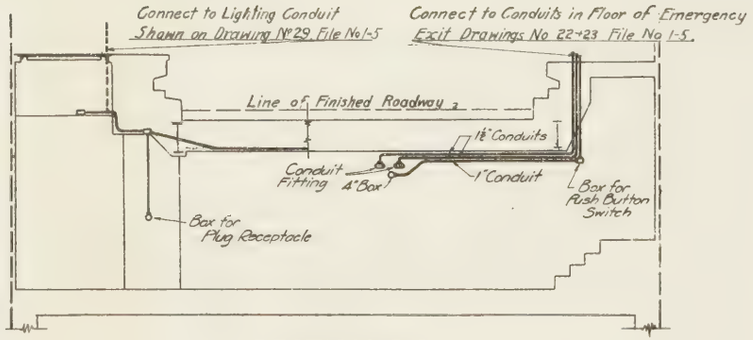
PLAN OF PUMP ROOM FLOOR



SECTION a-a


Line of Finished Roadway
Inserts for telpher track bolts.
1" Conduit
Box for Plug Receptacle
Conduit Fitting
1" Galv. Iron Pipe Conduit for automatic control
1" & 1½" Galv. Pipe Conduit Threaded & Capped

SECTION A-A


Connect to Lighting Conduit Shown on Drawing No 29 File No 1-5
Connect to Conduits in Floor of Emergency Exit Drawings No 22+23 File No 1-5.
Line of Finished Roadway 2
1½" Conduits
Conduit Fitting
4" Box
1" Conduit
Box for Push Button Switch
Box for Plug Receptacle

SECTION B-B

ELECTRICAL CONDUIT SYSTEM

Canal Street Shaft Pump Room, Spring Street Opposite Hand.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 31

Ole Singstad
ENGINEER OF DESIGNS

SCALE 0 1 2 3 4

DATE APRIL 25, 1923

DRAWN BY I.A.F.
CHECKED BY g n b

Clifford Holland
CHIEF ENGINEER

FILE NO. 1-5

GIRDER

MARK	WEB	4 Ls	COVER PLATES
G1	36 × 9/16	8 × 6 × 1/2	
G2	36 × 9/16	8 × 6 × 13/16	
G3	36 × 1/2	8 × 6 × 11/16	
G4	36 × 1/2	8 × 6 × 1/2	
G5	36 × 1/2	8 × 6 × 11/16	
G6	36 × 7/16	8 × 6 × 1/2	
G7	36 × 3/8	8 × 6 × 1/2	
G8	36 × 3/8	6 × 6 × 1/2	
G9	34 × 3/8	6 × 6 × 1/2	
G10	36 × 3/8	6 × 6 × 11/16	
G11	36 × 3/8	6 × 6 × 9/16	
G12	30 × 3/8	6 × 6 × 9/16	
G13	30 × 3/8	6 × 4 × 1/2	
G14	30 × 9/16	8 × 6 × 1/2	
G15	28 × 1/2	8 × 6 × 1/2	
G16	28 × 9/16	8 × 6 × 13/16	
G17	28 × 9/16	8 × 6 × 1/2	
G18	24 × 3/8	8 × 6 × 1/2	
G19	24 × 9/16	8 × 6 × 11/16	
G20	24 × 9/16	8 × 6 × 1/2	
G21	24 × 1/2	8 × 6 × 11/16	
G22	24 × 1/2	8 × 6 × 1/2	
G23	24 × 7/16	8 × 6 × 1/2	
G24	24 × 1/2	8 × 6 × 1/2	
G25	24 × 1/2	6 × 6 × 1/2	
G26	24 × 3/8	8 × 6 × 1/2	
G27	24 × 1/2	6 × 6 × 1/2	
G28	24 × 1/2	6 × 6 × 1/2	
G29	24 × 9/16	6 × 6 × 11/16	
G30	24 × 3/8	6 × 6 × 1/2	
G31	24 × 1/2	6 × 6 × 11/16	
G32	36 × 1/2	3 1/2 × 3 × 1/2	
G33	30 × 3/8	3 1/2 × 3 × 1/2	
G34	34 × 1/2	8 × 8 × 9/16	
G35	34 × 7/16	8 × 6 × 1/2	
G36	34 × 1/2	6 × 6 × 11/16	
G37	34 × 1/2	6 × 6 × 9/16	
G38	24 × 1/2	8 × 6 × 1/2	2-18 × 3/8 × 23'-6"
G39	24 × 7/16	8 × 6 × 11/16	
G40	48 × 7/16	8 × 8 × 1/2	2-18 × 11/16 × 16'-6"
G41	48 × 3/8	8 × 6 × 1/2	
G42	36 × 1/2	6 × 6 × 1/2	
G43	30 × 7/16	8 × 6 × 11/16	
G44	30 × 7/16	8 × 6 × 1/2	
G45	30 × 3/8	6 × 6 × 1/2	
G46	30 × 3/8	6 × 6 × 11/16	
G47	24 × 9/16	8 × 6 × 1/2	2-18 × 3/8 × 23'-3"
G48	24 × 9/16	8 × 6 × 1/2	2-18 × 1/2 × 21'-3"
G49	24 × 9/16	8 × 6 × 1/2	2-18 × 7/16 × 20'-0"
G50	24 × 7/16	6 × 6 × 1/2	2-14 × 3/8 × 24'-6"
G51	32 × 1/2	8 × 8 × 7/8	
G52	34 × 9/16	6 × 6 × 1/2	
G53	34 × 9/16	6 × 6 × 9/16	
G54	30 × 11/16	8 × 6 × 11/16	
G55	30 × 9/16	6 × 6 × 1/2	
G56	24 × 5/8	6 × 6 × 11/16	2-14 × 11/16 × 11'-6"
G57	54 × 7/16	6 × 6 × 9/16	2-14 × 1/2 × 14'-6"
	2 R.D. 52 1/2 - 1-2'-6"		
G58	50 × 11/16	8 × 6 × 1/2	2-18 × 1/2 × 20'-0"
			2-18 × 1/2 × 15'-6"

COLUMNS

MARK	WEB	4 Ls	COVER PLATES ETC.
C101	14 × 1/2	6 × 3 1/2 × 3/4	2-8 × 1/2
C102	16 × 3/8	6 × 6 × 9/16	
C103	16 × 3/8	6 × 6 × 1/2	
C104	16 × 3/8	6 × 6 × 7/16	
C105	10 × 5/8	6 × 4 × 13/16	
C106	10 × 5/8	6 × 4 × 3/4	Pl. 14 × 1/2, 15" [45#
C107	16 × 1/2	6 × 6 × 5/8	
C108	12 × 3/8	6 × 6 × 3/8	15" [55#
C109	14 × 3/8	6 × 6 × 7/16	
C110	12 × 9/16	6 × 4 × 5/8	12" [55#
C111	8 × 3/8	6 × 4 × 1/2	
C112	10 × 5/8	6 × 4 × 5/8	
C113	10 × 1/2	6 × 4 × 5/8	
C114	10 × 1/2	6 × 4 × 9/16	
C115	10 × 5/8	6 × 4 × 3/4	
C116	10 × 5/8	6 × 4 × 11/16	
C117	10 × 3/8	6 × 4 × 1/2	2-13 × 3/8
C118	16 × 3/8	6 × 6 × 9/16	15" [33.9#
C119	12 × 7/16	5 × 3 1/2 × 5/8	
C120	12 × 1/2	5 × 3 1/2 × 5/8	
C121	6 × 1/2	4 × 3 × 3/8	
C122	6 × 3/8	4 × 3 × 3/8	
C123			2 L's 3 × 2 1/2 × 3/8, 3/8" b.b.

GIRDERS-CONTINUED

MARK	WEB	FLANGE	COVER PLATES
G117	58 × 1/2	4 L's 6 × 6 × 3/8	2-14 × 1/2 × 13'-6
			2-14 × 1/2 × 6'-6"
G118	28 × 3/8	4 L's 6 × 3 1/2 × 1/2	

STRUTS

MARK	WEB	4 Ls	
S101	8 × 3/8	4 × 3 × 3/8	

ENTILATION BUILDING N.Y.

GRADE
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Piling

Piling

NORT

For location of members see Drawings Nos. 3-13 and 20-24 incl. File No. 1-5.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 19

DATE: APRIL 28, 1923

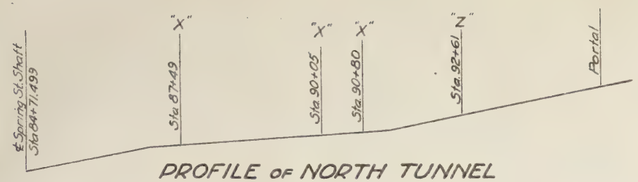
Ole Singstad
ENGINEER OF DESIGNS

CHIEF ENGINEER

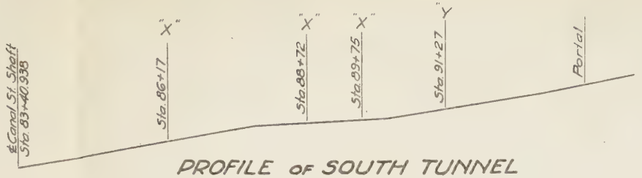
DRAWN BY J.P.K.
CHECKED BY A.N.O. A.G.

FILE NO. 1-5

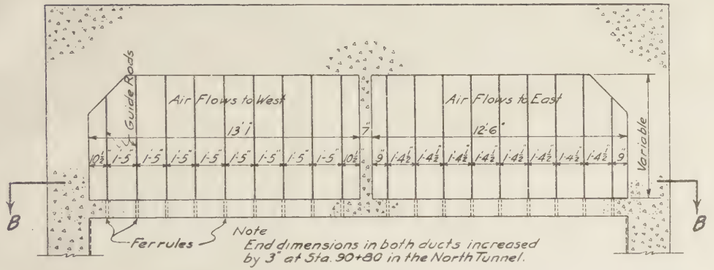
M E BROWN PRINTING & BINDING CO, N Y



PROFILE OF NORTH TUNNEL

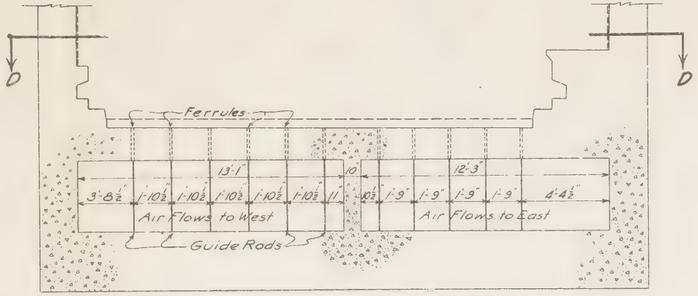


PROFILE OF SOUTH TUNNEL

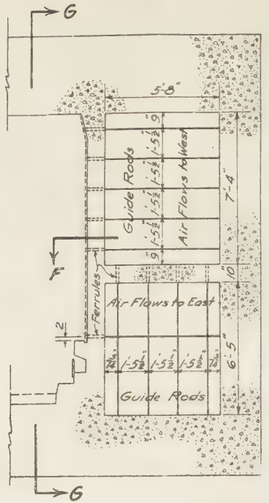


Note
End dimensions in both ducts increased by 3" at Sta. 90+80 in the North Tunnel.

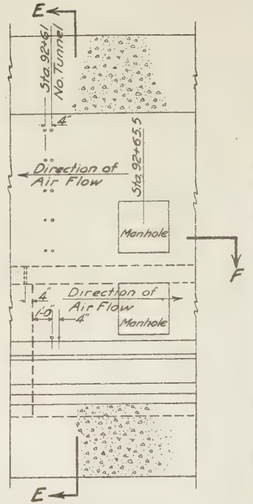
SECTION A-A



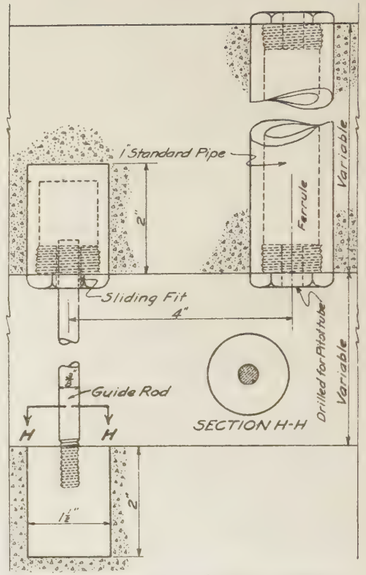
SECTION C-C



SECTION E-E

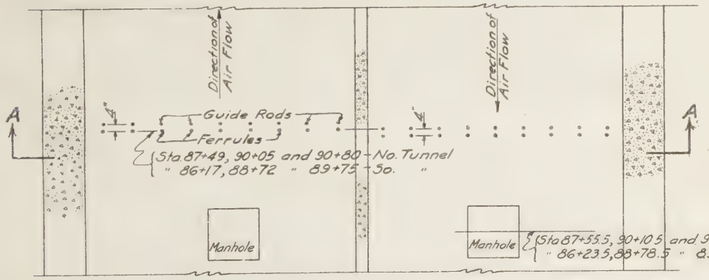


SECTION G-G



DETAILS OF GUIDE RODS AND FERRULES

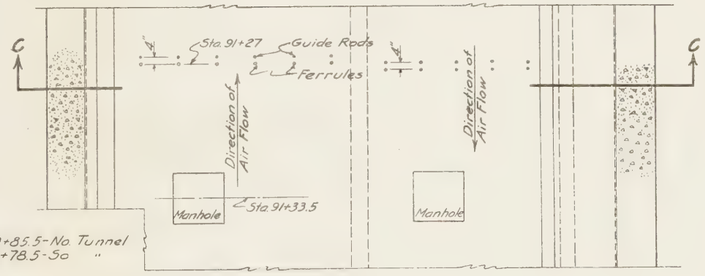
Scale: 0 1 2 3 4 in.



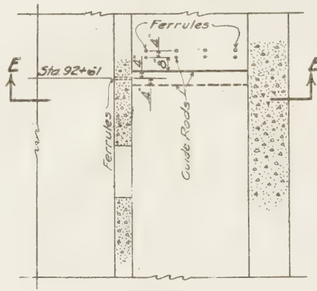
{Sta 87+49, 90+05 and 90+80 - No. Tunnel
" 86+17, 88+72 " 89+75 - So. "

{Sta 87+55.5, 90+10.5 and 90+85.5 - No. Tunnel
" 86+23.5, 88+78.5 " 89+78.5 - So "

SECTION B-B



SECTION D-D



SECTION F-F

Note:-
Guide rods to be furnished complete with end fittings.
All guide rods, fittings and ferrules to be of brass.
Guide rods in all cases to be 4' in the direction of air flow, from ferrules.

DETAIL AT "X"

Scale: 1 0 1 2 3 4 5 ft.

DETAIL AT "Y"

Scale: 1 0 1 2 3 4 5 ft.

DETAIL AT "Z"

Scale: 1 0 1 2 3 4 5 ft.

Ch. Engstrand
ENGINEER OF DESIGNS

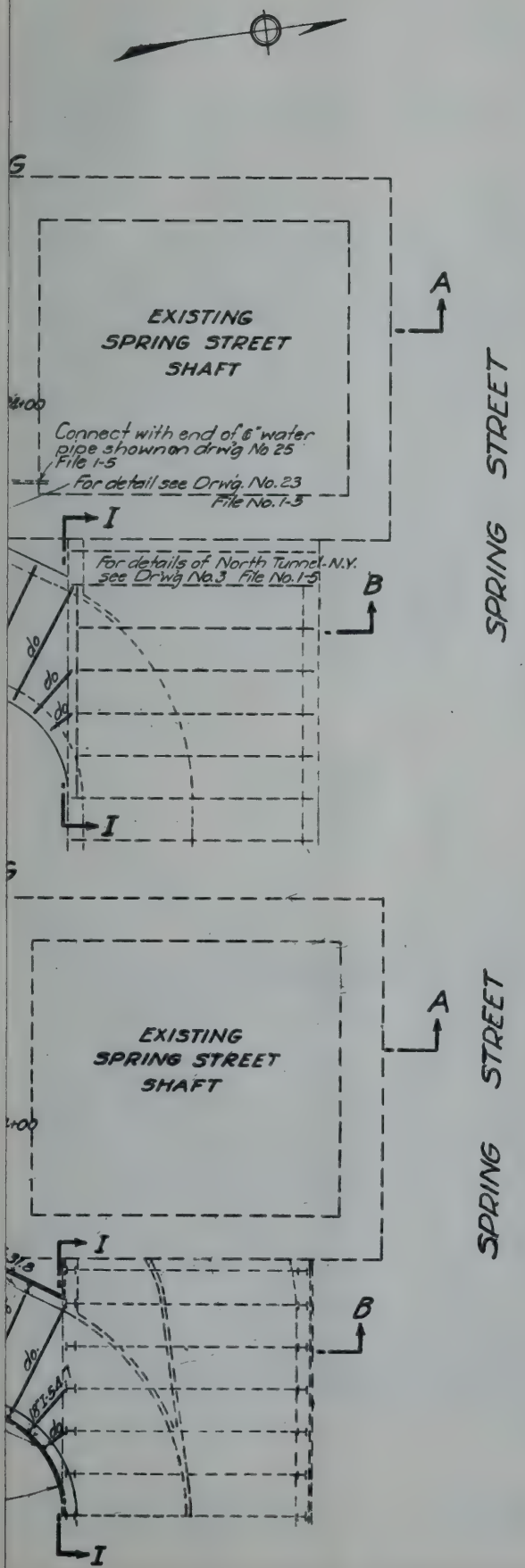
DETAILS OF AIR MEASUREMENT APPARATUS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 32

SCALE: As shown
DATE: APRIL 28, 1925
DRAWN BY
CHECKED BY
CHIEF ENGINEER
FILE No. 1-5

M.P. BROWN PRINTING & BINDING CO. N.Y.



REFERENCE NOTES

For Cross Sections A-A, B-B, C-C and H-H see Dwg. No. 21 File No. 1-5

For Cross Sections D-D, E-E & d-d see Dwg. No. 22 File No. 1-5

For Cross Sections F-F, G-G and I-I see Dwg. No. 23 File No. 1-5

For Part Cross Sections A-A, B-B and Cross Sections L-L and M-M see Dwg. No. 24 File No. 1-5

For Girder and Column Schedule see Dwg. No. 10 File No. 1-5

For Basement Floor Drainage System see Drwgs. Nos. 21, 22 & 24 File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 20

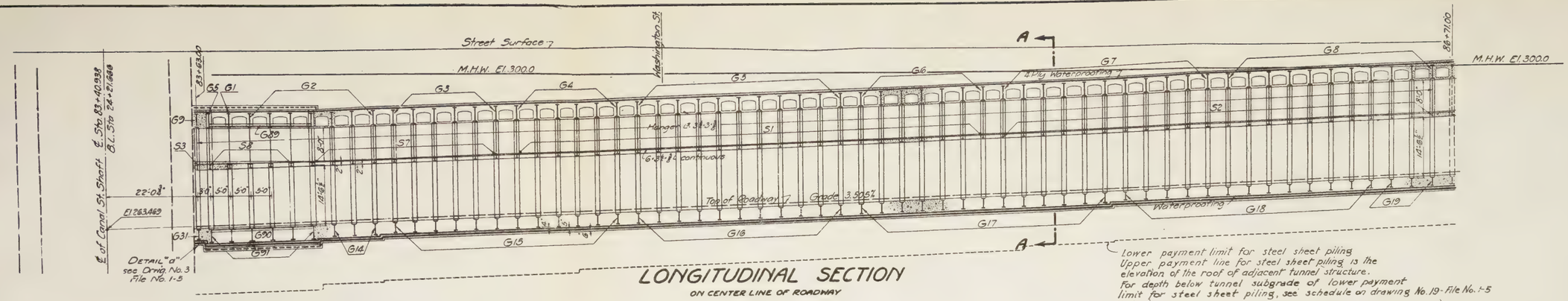
SCALE: 0 5 10 FT.

DATE: APRIL 25, 1923.

O. H. Ballard
CHIEF ENGINEER

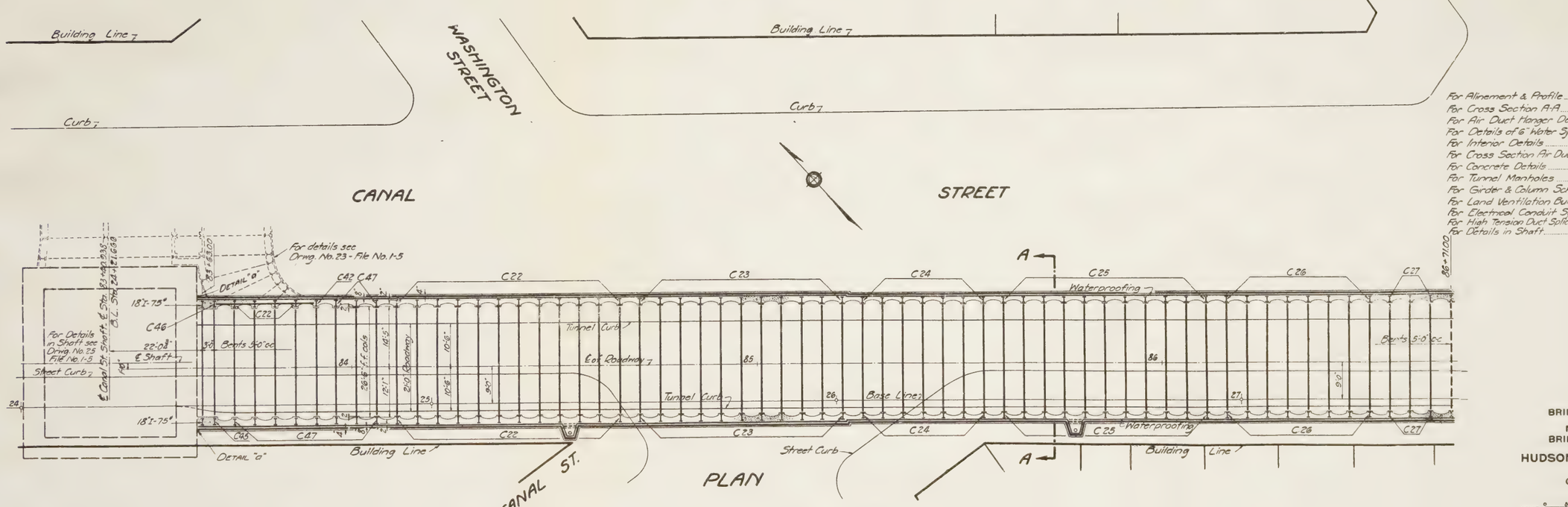
DRAWN BY O.F.B.
CHECKED BY J.R.S.V.G.

FILE NO. 1-5


Street Surface
M.H.W. El. 300.0
Washington St.
4 Ply Waterproofing
Hanger @ 3.33'
6-3/8" ϕ continuous
Top of Roadway
Grade 3.505%
Waterproofing
M.H.W. El. 300.0
℄ of Canal St. Shaft
℄ Sta. 23+40.938
Bl. Sta. 24+21.688
El 263.469
DETAIL "a" see Drwg. No. 3 File No. 1-5
Lower payment limit for steel sheet piling. Upper payment line for steel sheet piling is the elevation of the roof of adjacent tunnel structure. For depth below tunnel subgrade of lower payment limit for steel sheet piling, see schedule on drawing No. 19 - File No. 1-5

LONGITUDINAL SECTION

ON CENTER LINE OF ROADWAY



PLAN

SOUTH TUNNEL - NEW YORK

For Alinement & Profile	see Drwg. No. 2	File No. 1-5
For Cross Section A-A	" " 9	" " 1-5
For Air Duct Hanger Details	" " 9	" " 1-5
For Details of 6" Water System	" " 13	" " 1-5
For Interior Details	" " 14	" " 1-5
For Cross Section Air Duct on Top	" " 15	" " 1-5
For Concrete Details	" " 16	" " 1-5
For Tunnel Manholes	" " 18	" " 1-5
For Girder & Column Schedules	" " 19	" " 1-5
For Land Ventilation Building, N.Y.	Drwgs. Nos. 20-24 incl.	" " 1-5
For Electrical Conduit Systems	" " 29-30	" " 1-5
For High Tension Duct Splicing Chamber	Drwg. No. 17	" " 1-5
For Details in Shaft	" " 25	" " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 6

SCALE: 0 5 10 FEET

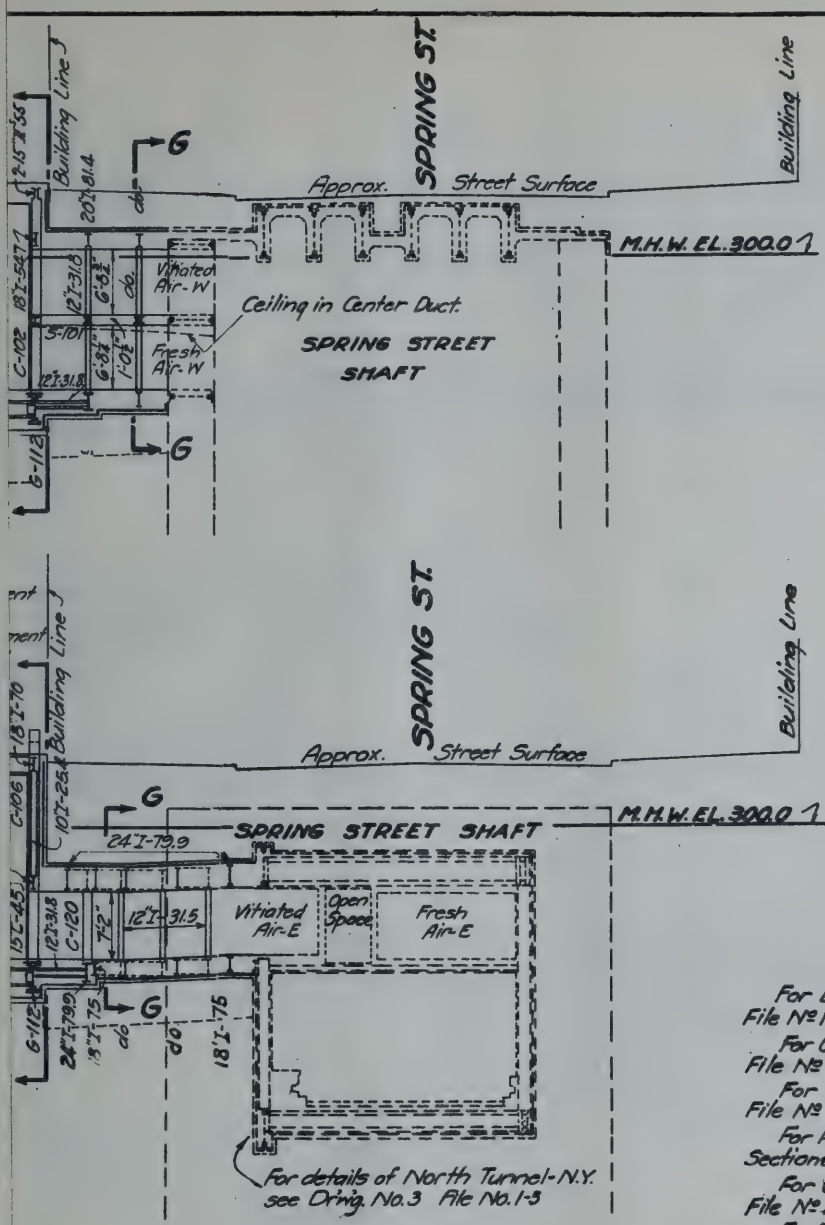
DATE: APRIL 23, 1925

CHIEF ENGINEER

DRAWN BY: W.H.
CHECKED BY: O.H.B.

FILE NO. 1-5

CHIEF ENGINEER OF DESIGNS



REFERENCE NOTES

For Location of Sections see Dwg. Nº 20 File Nº 1-5

For Cross Sections D-D, E-E & d-d see Dwg. Nº 22 File Nº 1-5

For Cross Sections F-F and G-G see Dwg. Nº 23 File Nº 1-5

For Part Cross Sections A-A, B-B and Cross Sections L-L and M-M see Dwg. Nº 24 File Nº 1-5

For Girder and Column Schedule see Dwg. Nº 19 File Nº 1-5

For Location of Basement Floor Drainage System see also Drwg's. Nos. 22 & 24 File No. 1-5.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 21

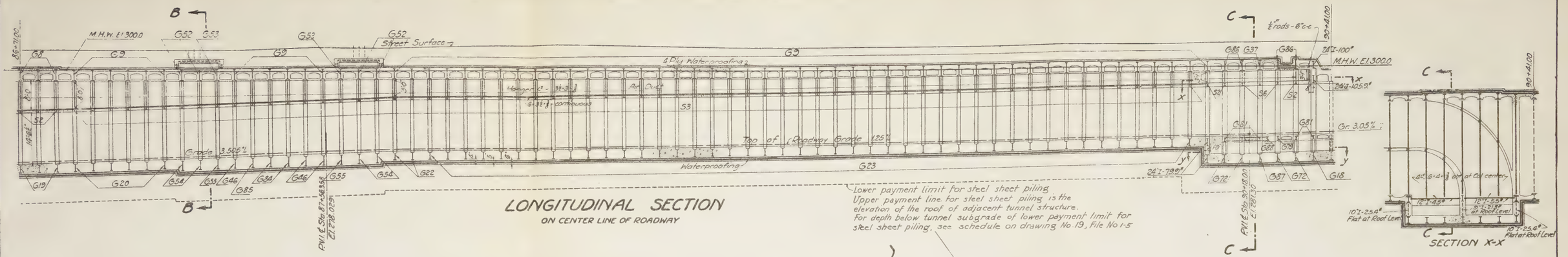
SCALE: 0 5 10 FT

DATE: APRIL 28, 1949

CHIEF ENGINEER

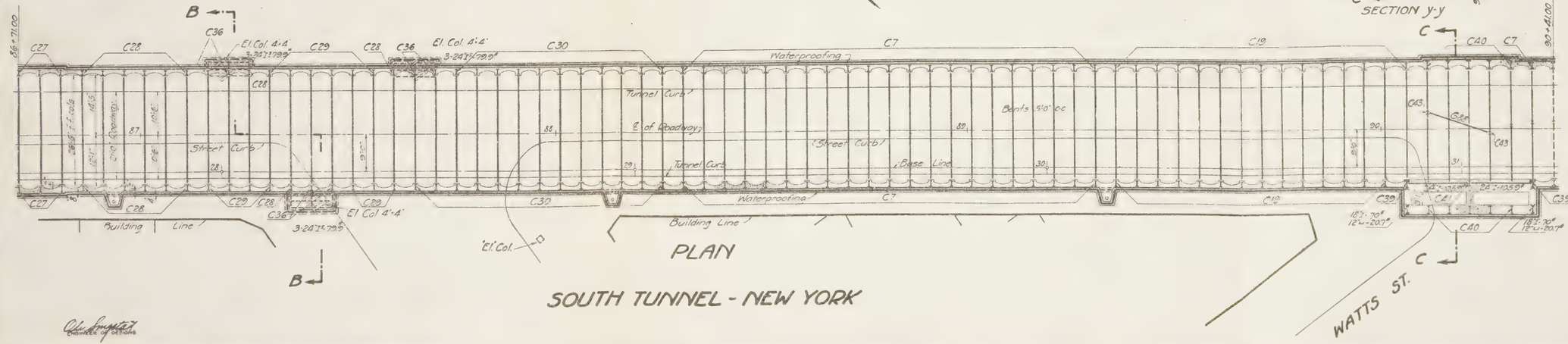
DRAWN BY O.F.S.
CHECKED BY O.K. O.Z.G.

FILE NO 1-5


M.H.W. El 3.00.0
Street Surface
4 Ply Waterproofing
Air Duct
Top of Roadway Grade 1.25%
Grade 3.506%
Waterproofing
Gr. 3.05%
Lower payment limit for steel sheet piling.
Upper payment line for steel sheet piling is the elevation of the roof of adjacent tunnel structure.
For depth below tunnel subgrade of lower payment limit for steel sheet piling, see schedule on drawing No. 19, File No 1-5
Building Line
Street Curb
GREENWICH ST.
RENWICK ST.
CANAL
STREET
SECTION X-X
SECTION y-y

LONGITUDINAL SECTION
ON CENTER LINE OF ROADWAY

For Alinement & Profile	see Dmg. No. 2		File No. 1-5
For Cross Section B-B & C-C	" " 10	" "	1-5
For Air Duct Hanger Details	" " 9	" "	1-5
For Details of 6" Water System	" " 13	" "	1-5
For Interior Details	" " 14	" "	1-5
For Cross Section Air Duct on Top	" " 15	" "	1-5
For Concrete Details	" " 16	" "	1-5
For Tunnel Manholes	" " 18	" "	1-5
For Girder & Column Schedules	" " 19	" "	1-5
For Land Ventilation Building, N.Y.	Dmgs. Nos. 20-24 incl.	" "	1-5
For Electrical Conduit Systems	" " 29-30	" "	1-5
For High Tension Duct Splicing Chamber	Dmg. No. 17	" "	1-5



PLAN
SOUTH TUNNEL - NEW YORK

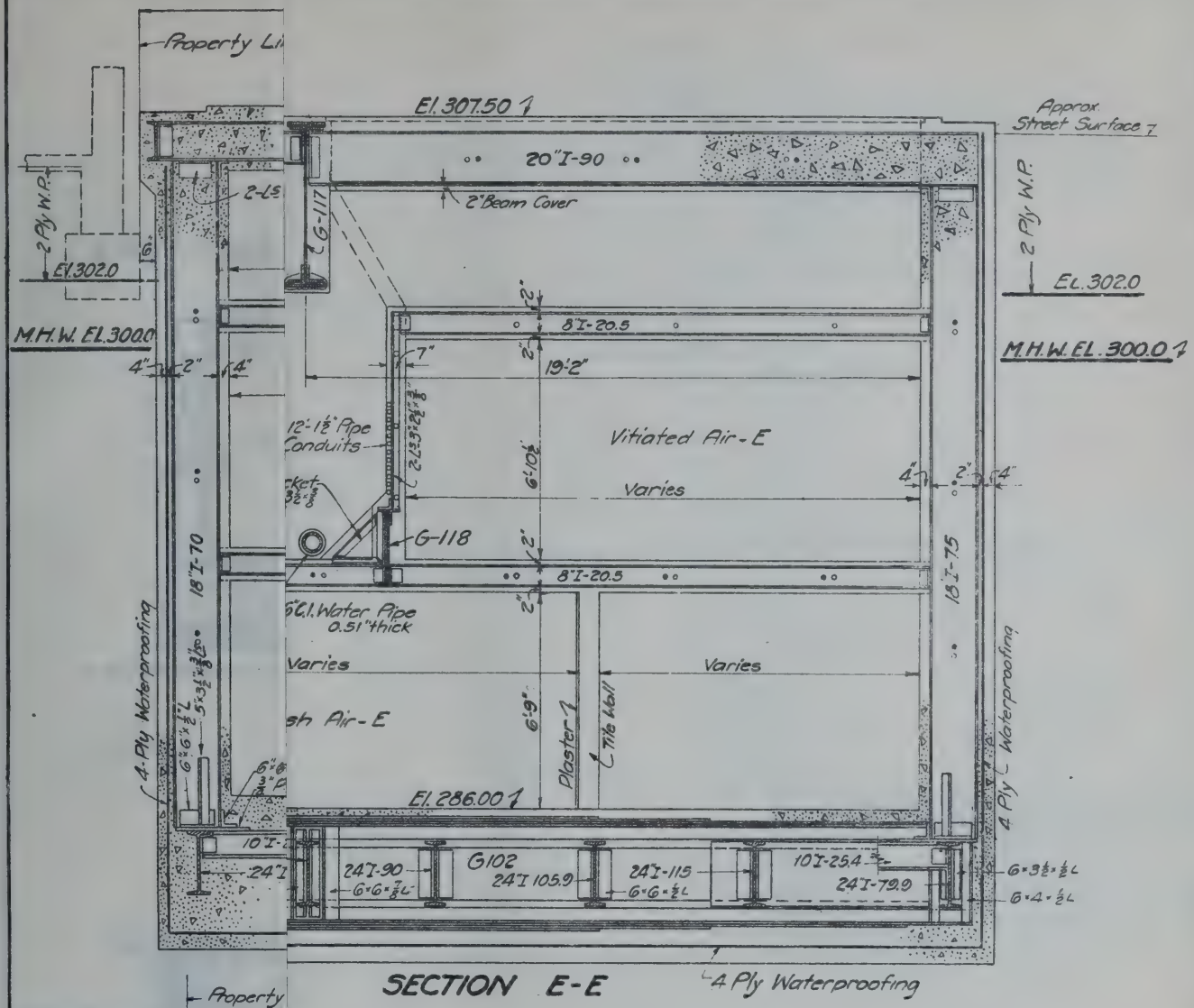
NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 7

SCALE 0 5 10 FEET
DATE APRIL 23, 1925
DRAWN BY M.G.
CHECKED BY M.G. O.F.G.
CHIEF ENGINEER
FILE No. 1-5

Chief Inspector
Chief Engineer of Design

M B BROWN PRINTING & BINDING CO. N.Y.



REFERENCE NOTES

For Location of Cross Sections see Dwg. No. 20 File No. 1-5

For Girder and Column Schedule see Dwg. No. 19 File No. 1-5

For Additional detail of Air Ducts in basement see Dwg. No. 24 File No. 1-5

For 6" Water Pipe System see Dwgs. Nos. 20 & 24 File No. 1-5

For Location of Basement Floor Drainage System see also Dwgs. No. 21 & 24 File No. 1-5

For Location of Air Duct Manholes see Dwg. No. 24 File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 22

SCALE: 0 1 2 3 FT.

DATE: APRIL 23, 1925

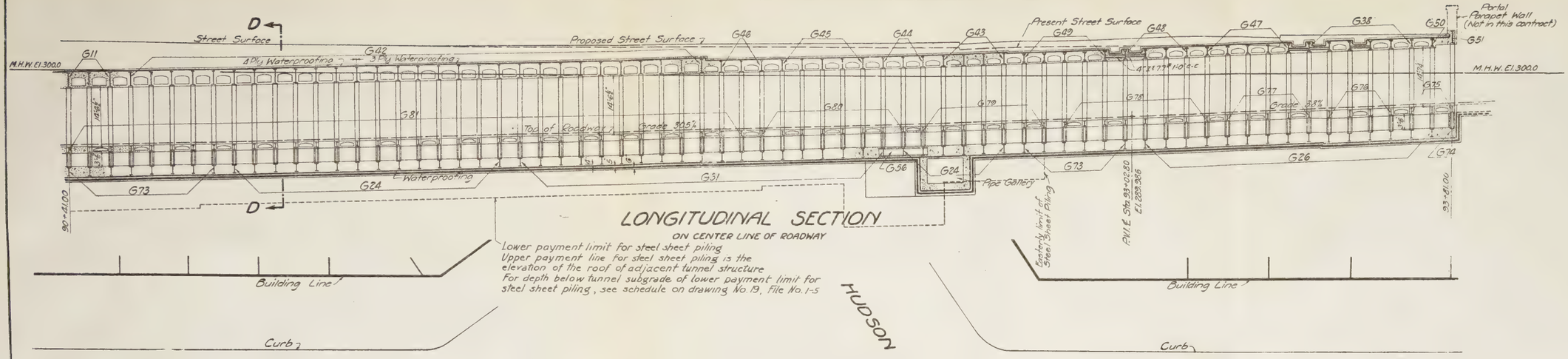
Ole Singstad
ENGINEER OF DESIGNS

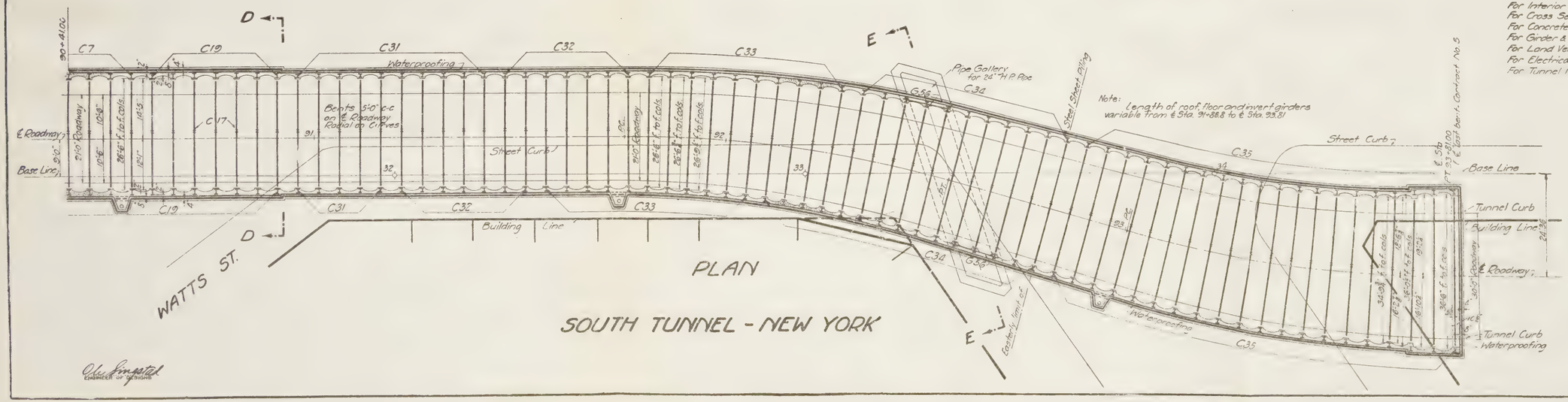
Clifford Holland
CHIEF ENGINEER

DRAWN BY O.F.S.
CHECKED BY O.F.S.

FILE No. 1-5

A.B. BROWN PRINTING & BINDING CO. N.Y.


Street Surface
Proposed Street Surface
Present Street Surface
Portal Parapet Wall (Not in this Contract)
M.H.W. El. 300.0
4 Ply Waterproofing
3 Ply Waterproofing
Top of Roadway
Grade 3.05%
Grade 3.8%
E Waterproofing
Pipe Gallery
Easterly limit of Steel Sheet Piling
P.V.I. Sta. 93+02.80
El. 289.906
90+41.00
93+41.00
Building Line
Curb
LONGITUDINAL SECTION
ON CENTER LINE OF ROADWAY
Lower payment limit for steel sheet piling
Upper payment line for steel sheet piling is the elevation of the roof of adjacent tunnel structure
For depth below tunnel subgrade of lower payment limit for steel sheet piling, see schedule on drawing No. 19, File No. 1-5
HUDSON ST.
CANAL
STREET


WATTS ST.
Waterproofing
Bents 5'-0" c-c on ℄ Roadway Radial on Curves
Street Curb
Building Line
Pipe Gallery for 24" H.P. Pipe
Steel Sheet Piling
Note: Length of roof, floor and invert girders variable from ℄ Sta. 91+88.8 to ℄ Sta. 93.81
Base Line
Tunnel Curb
Tunnel Curb - Waterproofing
Easterly limit of
Waterproofing
PLAN
SOUTH TUNNEL - NEW YORK

For Alinement and Profile	see Drwg. No. 2		File No. 1-3
For Cross Section D-D	" "	9	" " 1-3
For Cross Section E-E	" "	11	" " 1-3
For High Tension Splicing Chamber	" "	17	" " 1-3
For Details of 6" Water Pipe System	" "	13	" " 1-3
For Interior Details	" "	14	" " 1-3
For Cross Section Air Duct at Bottom	" "	15	" " 1-3
For Concrete Details	" "	16	" " 1-3
For Girder & Column Schedules	" "	19	" " 1-3
For Land Ventilation Building - N.Y.	" Drwgs. Nos. 20-28 incl.		" " 1-3
For Electrical Conduit Systems	" "	29-30	" " 1-3
For Tunnel Manholes	" Drwg. No. 18		" " 1-3

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 8

SCALE: 0 5 10 FEET
DATE: APRIL 23, 1925

DRAWN BY P.P.K. - M.A.
CHECKED BY J.C. O.E.G.

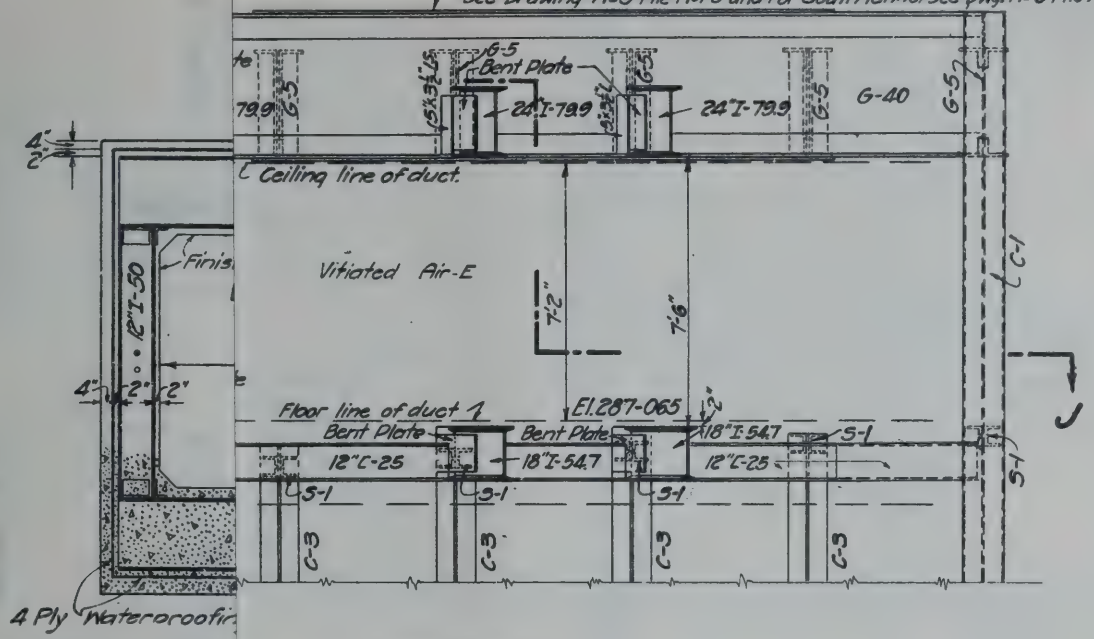
CHIEF ENGINEER

FILE NO. 1-3

ENGINEER OF TUNNELS

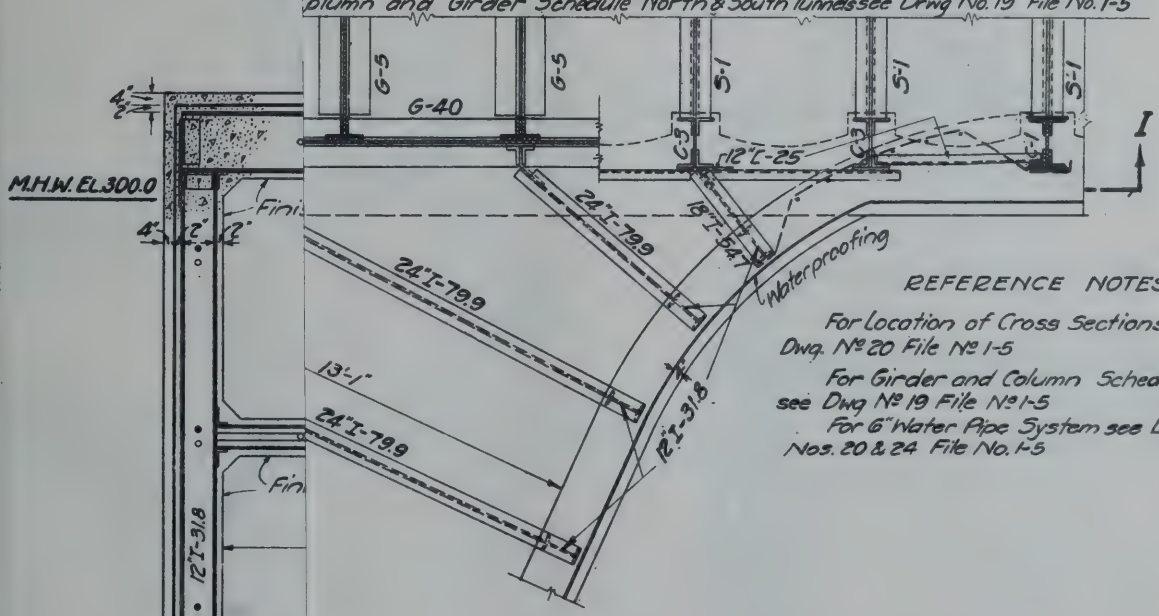
00.01

For Plan and Longitudinal Sections For North Tunnel
See Drawing No 3 File No 1-5 and For South Tunnel see Dwg. No 6 File No 1-5



SECTION I-I

Column and Girder Schedule North & South Tunnels see Drwg No. 19 File No. 1-5



REFERENCE NOTES

For Location of Cross Sections see Dwg. No 20 File No 1-5

For Girder and Column Schedule see Dwg No 19 File No 1-5

For 6" Water Pipe System see Drwgs. Nos. 20 & 24 File No. 1-5

ON J-J

(To North Tunnel
Tunnel Similar To Above)

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No 5
CONTRACT DRAWING No. 23

ALE: 0 1 2 3

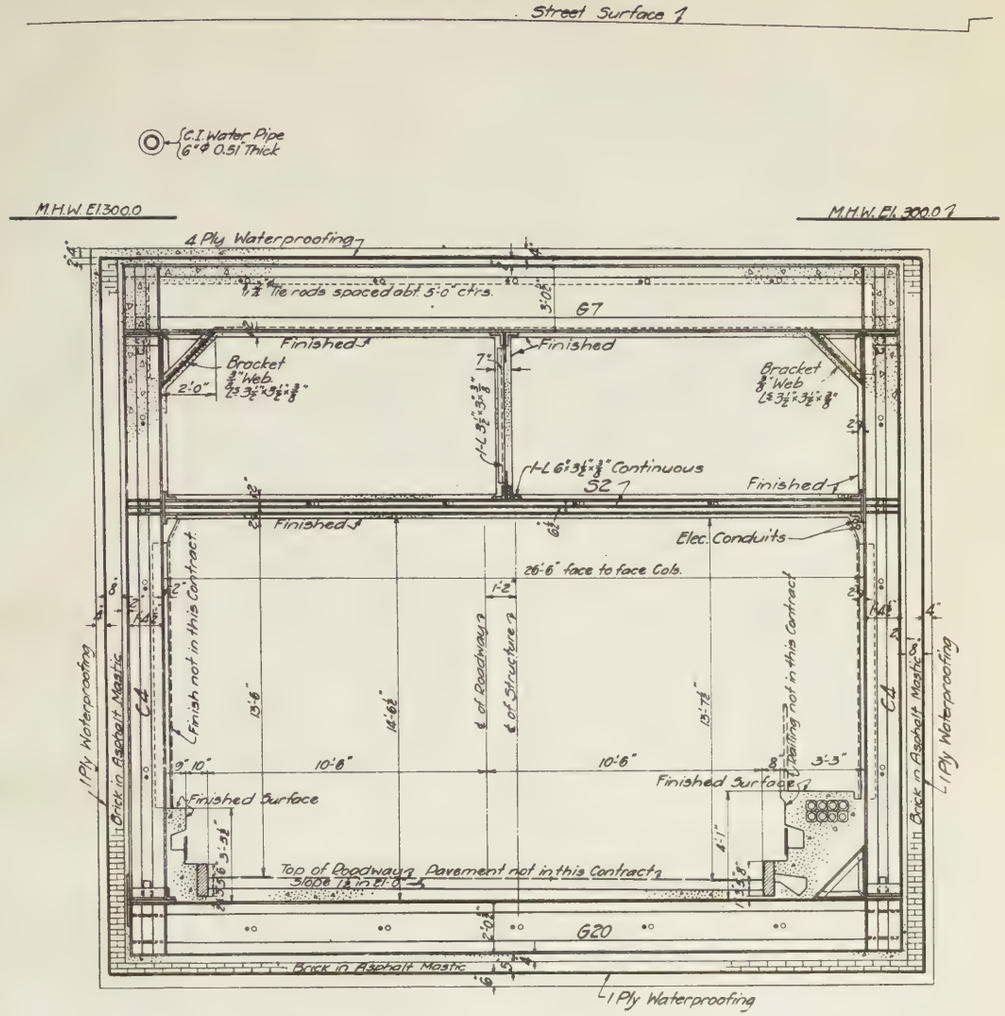
DATE: APRIL 28, 1923

Ole Singstad
ENGINEER OF DESIGNS

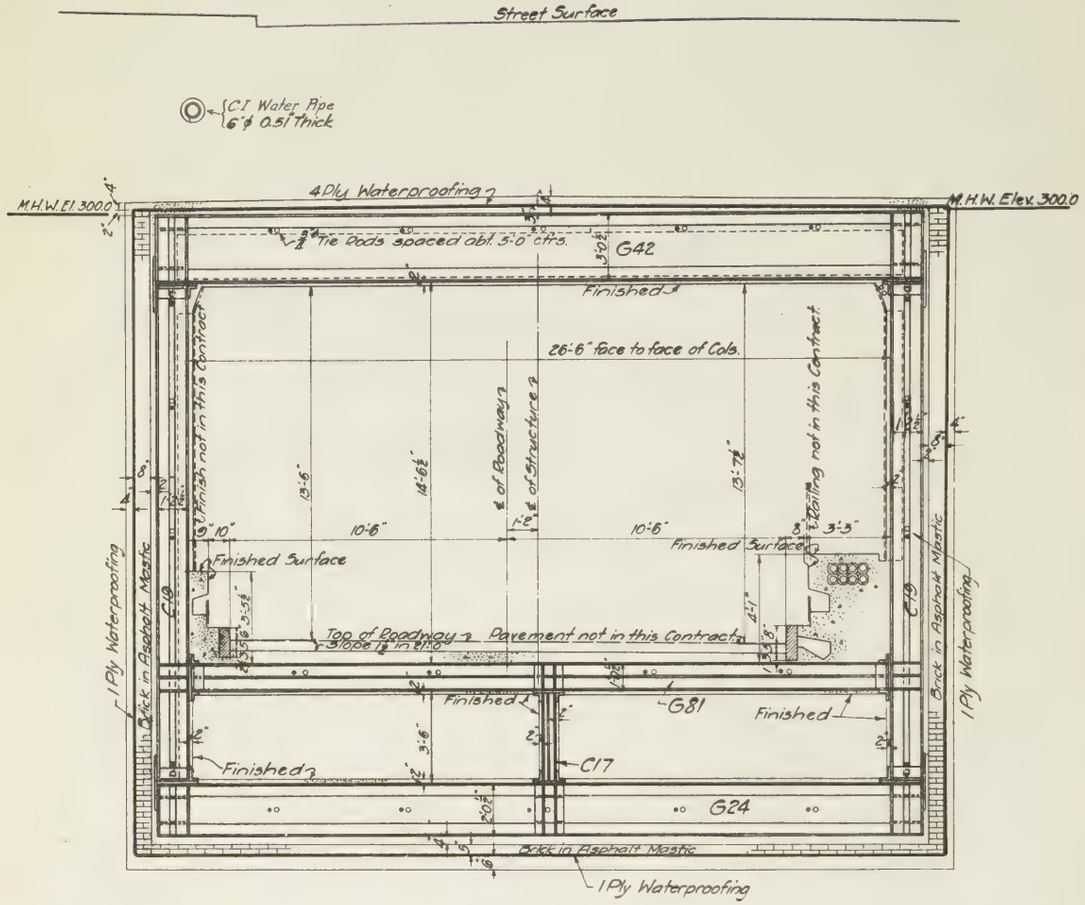
Clifford Holland
CHIEF ENGINEER

DRAWN BY O.S.S.
CHECKED BY O.S.S.

FILE NO 1-5



CROSS SECTION F-F (AS SHOWN)
CROSS SECTION A-A (SIMILAR)



CROSS SECTION D-D

For Plan & Long. Sect. see Dwg. No. 6 File No. 1-5
" " " " " " No. 8 " No. 1-5
" " " " " " No. 3 " No. 1-5
For Column and Girder Schedule see Dwg. No. 19 File No. 1-5
For Interior Details see Dwg. No. 14 File No. 1-5
" Concrete " " " No. 15-16 File No. 1-5
" Details of 6" Water Pipe System see Dwg. No. 13 File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

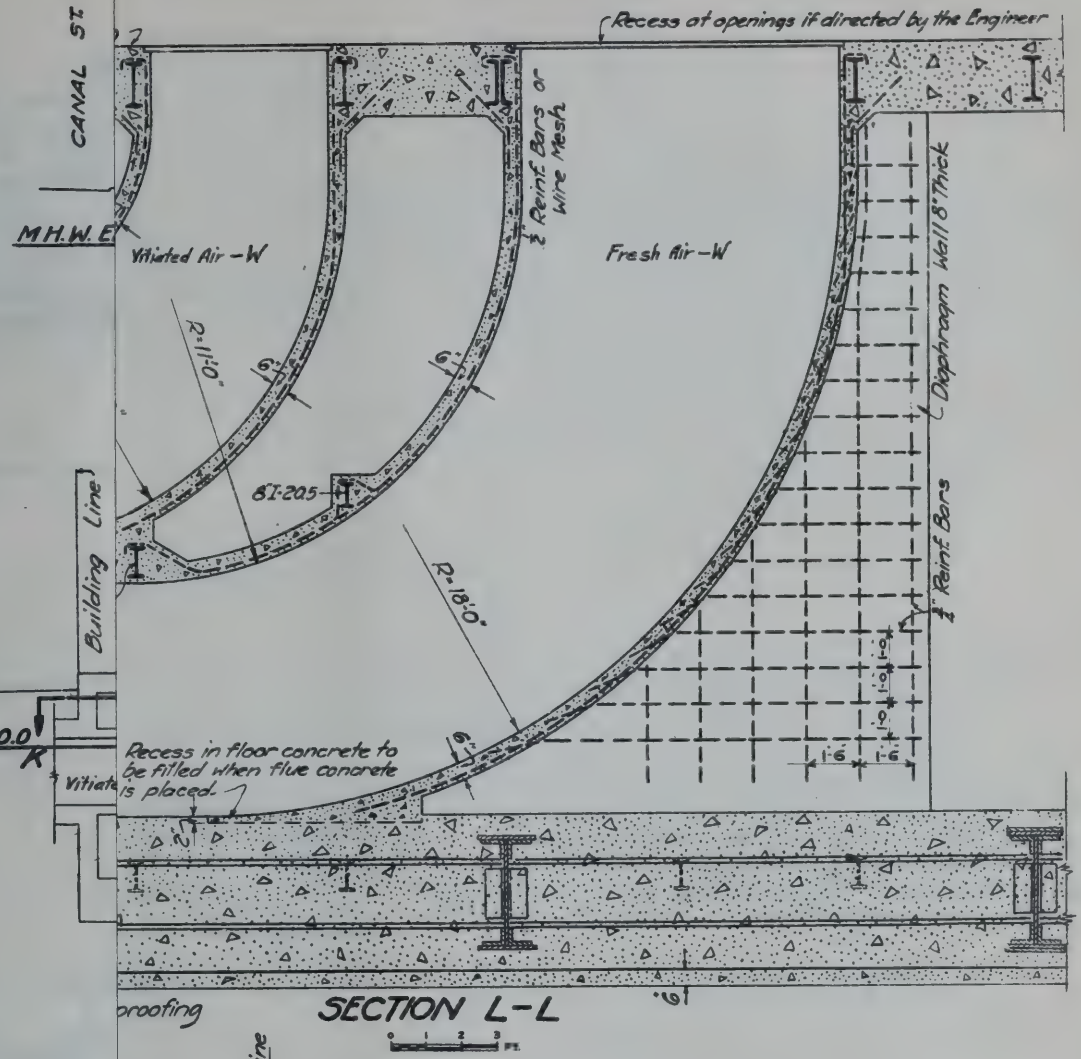
CONTRACT No. 5
CONTRACT DRAWING No. 9

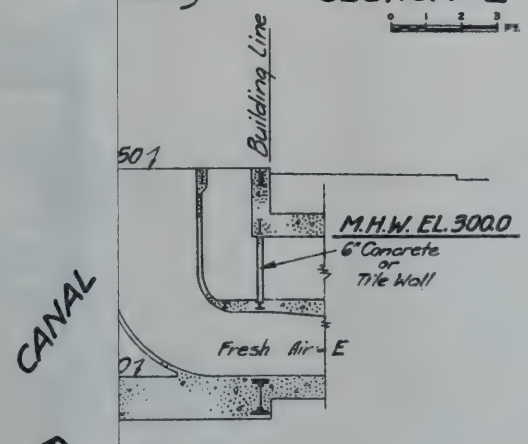
SCALE 0 1 2 3
DATE: APRIL 25, 1925
DRAWN BY J.P.K.
CHECKED BY
FILE No. 1-5

Ole Singstad
ENGINEER OF DESIGN

Clifford Holland
CHIEF ENGINEER

M. E. BROWN PRINTING & BINDING CO. N.Y.





CTION M-M

REFERENCE NOTES

For Location of Cross Sections see Dwg. No 20 File No 1-5

For Girder and Column Schedule see Dwg. No 19 File No 1-5

For Location of Basement Floor Drainage System see also Drwg's. Nos. 21 & 22 File No. 1-5

For Manhole Details see Drwg. No 18 File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 24

SCALE: 0 5 10 FT.

DATE: APRIL 29, 1925

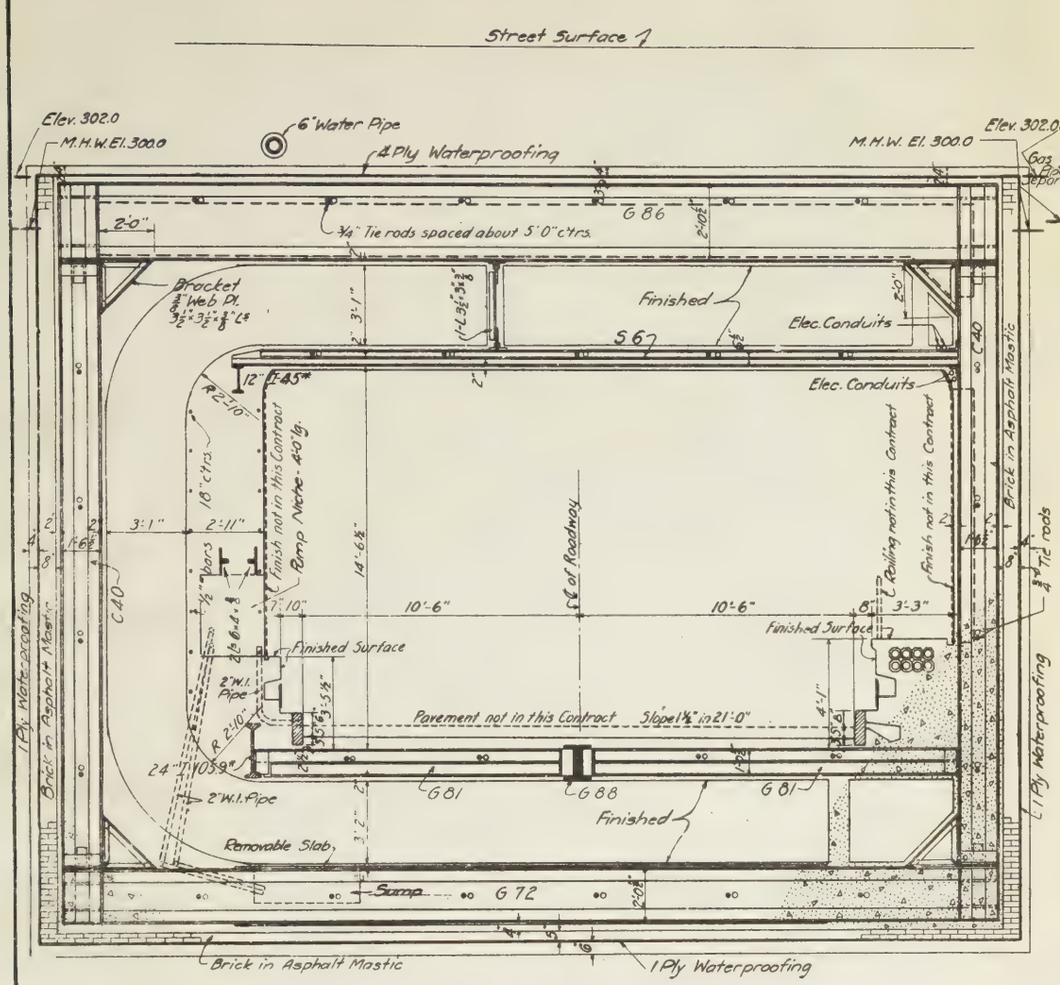
CHIEF ENGINEER

ENGINEER OF DESIGN

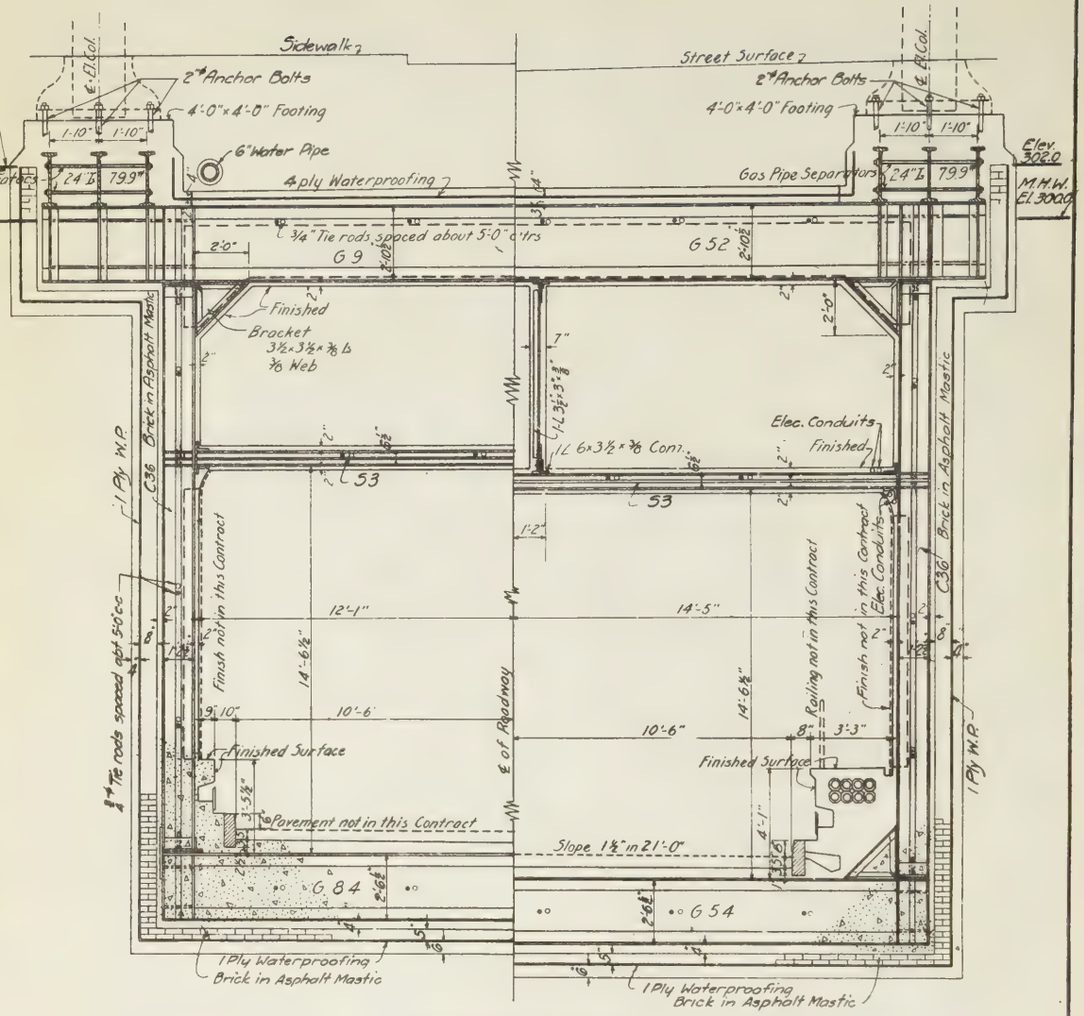
DRAWN BY O.F.B.
CHECKED BY J.T.O'B.

FILE No. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.



CROSS SECTION C-C



CROSS SECTION B-B

For Plan & Longitudinal Section see Dwg N37 File N21-5
" Girder & Column Schedule " " " 19 " " 1-5
" Interior Details " " " 14 " " 1-5
" Concrete " " " 15-16 " " 1-5
" Details of 6" Water Pipe System " " " 13 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 10

SCALE 0 1 2 3 FEET

DATE: APRIL 23, 1928

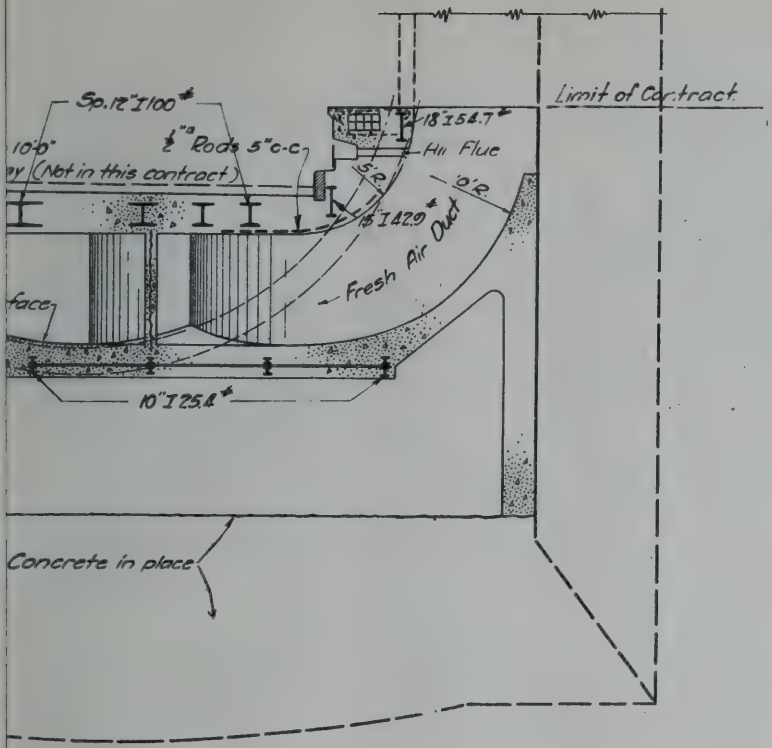
Ole Singstad
ENGINEER OF DESIGN

Clifford Holland
CHIEF ENGINEER

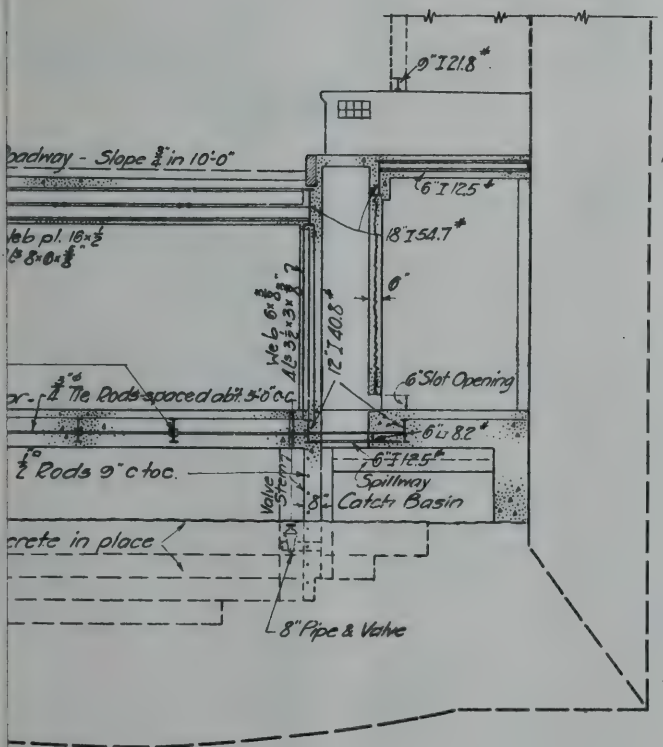
DRAWN BY M.A.
CHECKED BY [illegible]

FILE NO. 1-5

M B BROWN PRINTING & BINDING CO. N Y



CTION D-D.



CTION E-E

For Alinement & Profile ..... see Drwg's Nos 1 & 2 File No 1-5
For Sidewalk & Roadway Details " Drwg No 14 " " 1-5
For Electrical Conduit System " " " 31 " " 1-5
For High Tension Duct Splicing Chamber " " " 17 " " 1-5
For 6" Water Pipe System in Ventilation Building ..... see Drwg. No. 20 - File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 25

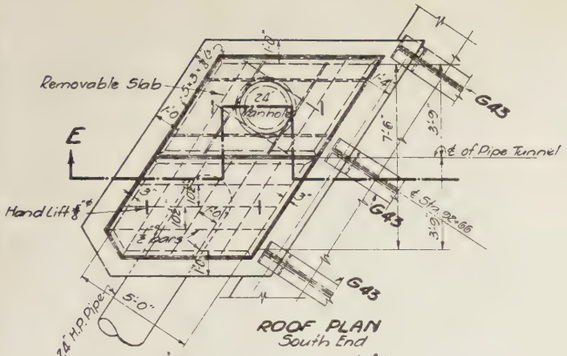
SCALE: 0 1 2 3 FEET

DATE April 23, 1923

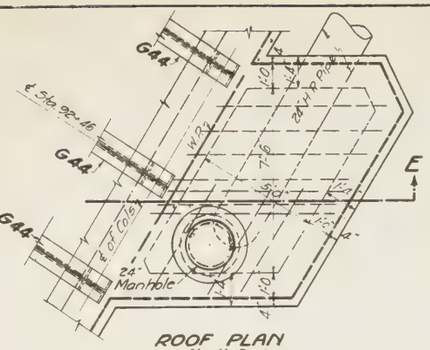
DRAWN BY L. R. D. - W. C.
CHECKED BY W.S.D.

CHIEF ENGINEER

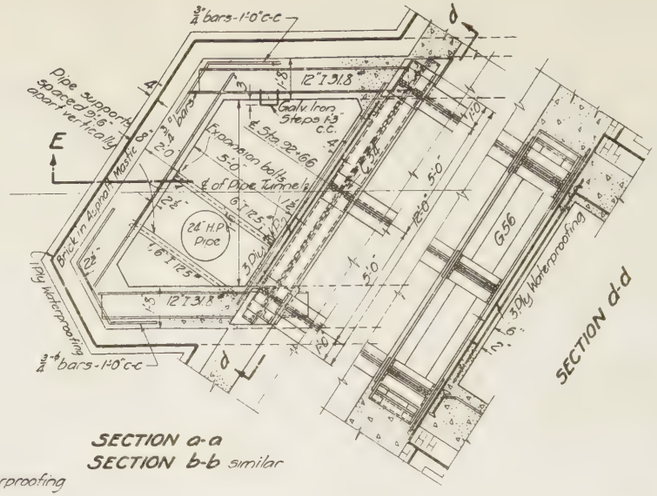
FILE NO 1-5



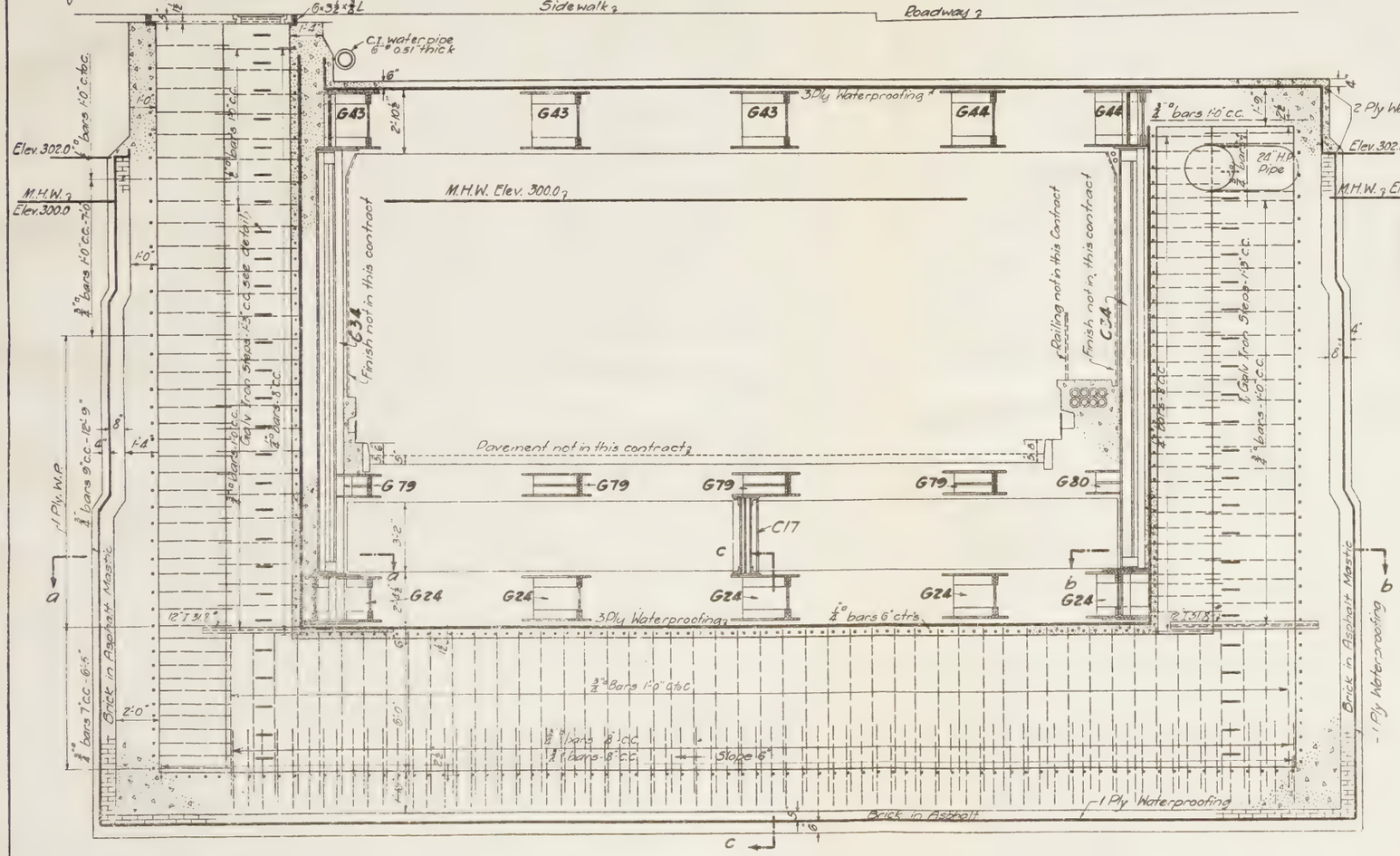
ROOF PLAN
South End



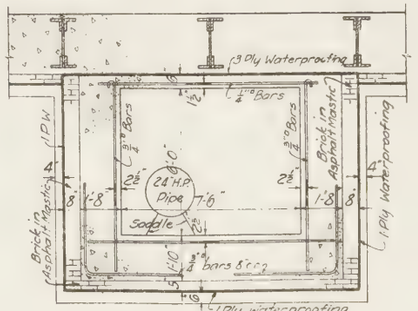
ROOF PLAN
North End



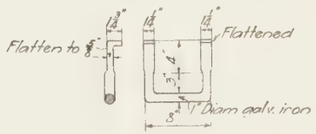
SECTION a-a
SECTION b-b similar



CROSS SECTION E-E



SECTION c-c



STEP FOR MANHOLES

For Plan and Longitudinal Section see drwg No 8 File No 1-5
For Girder and Column Schedules " " " 19 " " 1-5
For Interior Details " " " 14 " " 1-5
For Concrete " " " 15, 16 " " 1-5
For Details of 8" Water Pipe System " " " 13 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

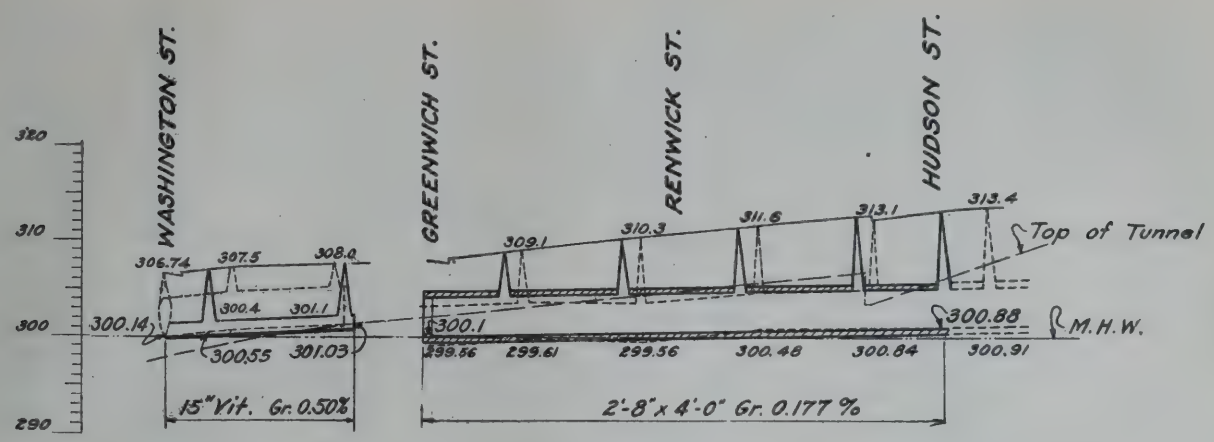
HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 11

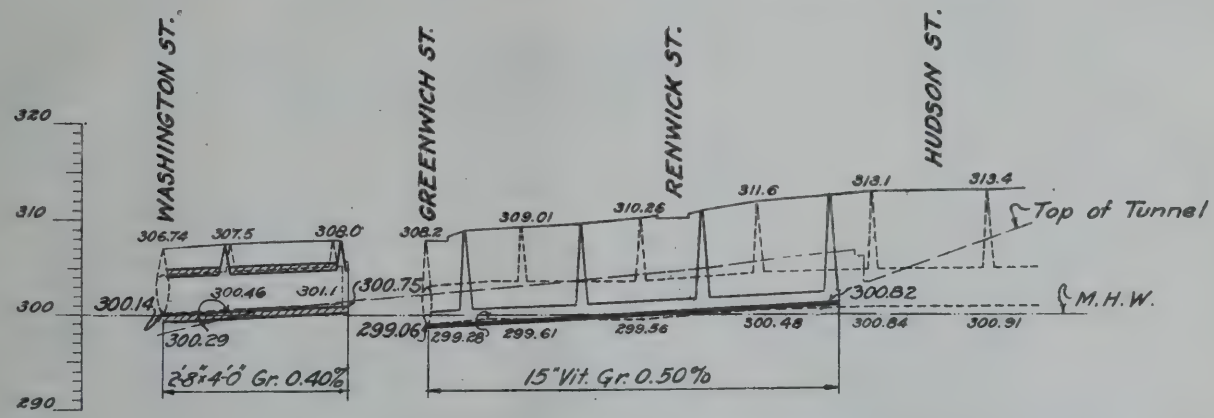
SCALE 0 1 2 FEET
DATE APRIL 28, 1928
DRAWN BY L.R.B.
CHECKED BY L.F.P. O.H.A.
CHIEF ENGINEER
FILE NO. 1-5

ENGINEER OF DESIGN

M.B. BROWN PRINTING & BINDING CO. N.Y.



PROFILE - SPRING STREET - NORTH SIDE



PROFILE - SPRING STREET - SOUTH SIDE

LEGEND:-

New sewers
Existing sewers retained
Existing sewers abandoned
New manholes
New basins
Existing manholes
Existing basins

For alinement and profile of North tunnel see Drawing No. 1, File No. 1-5
For alinement and profile of South tunnel see Drawing No. 2, File No. 1-5
For details of Inlets, Basins, Manholes and Sewers see Drawing No. 27, File No. 1-5
For details of Cast Iron for Inlets, Basins and Manholes see Drawing No. 28, File No. 1-5

Note:-

All existing sewers which are to be retained, shall be rebuilt if disturbed, and no payment will be made for same unless otherwise specifically provided for in the contract.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 26

SCALE: AS SHOWN

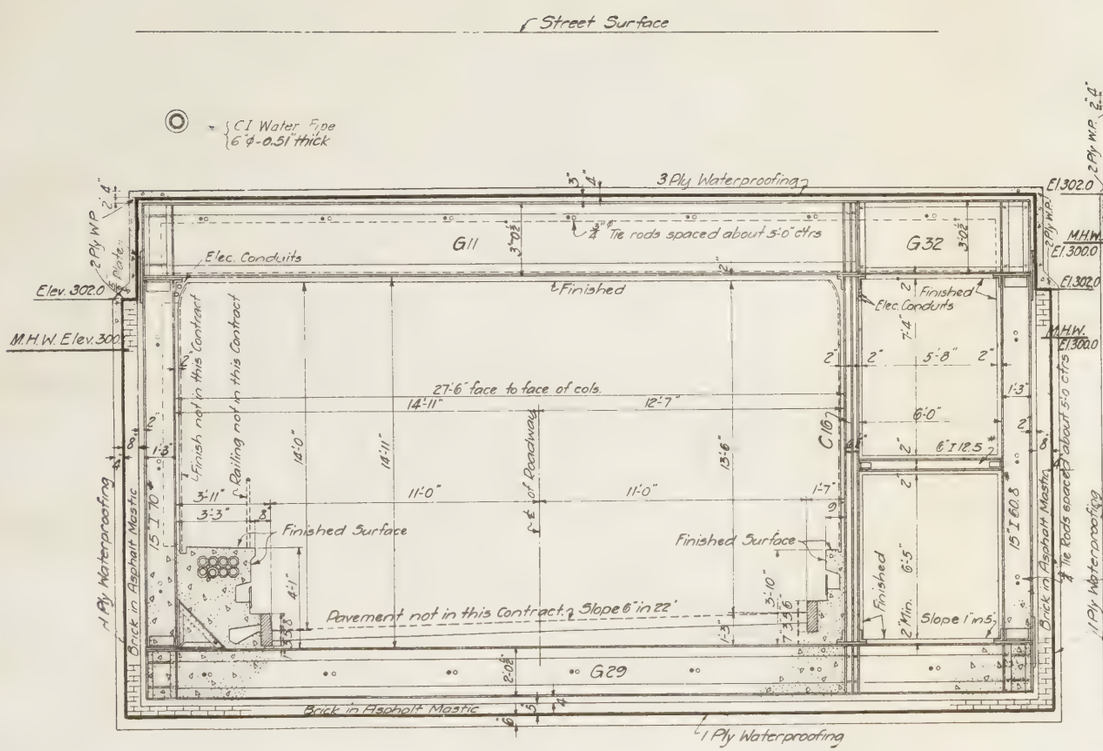
DATE APRIL 23, 1923.

CHIEF ENGINEER

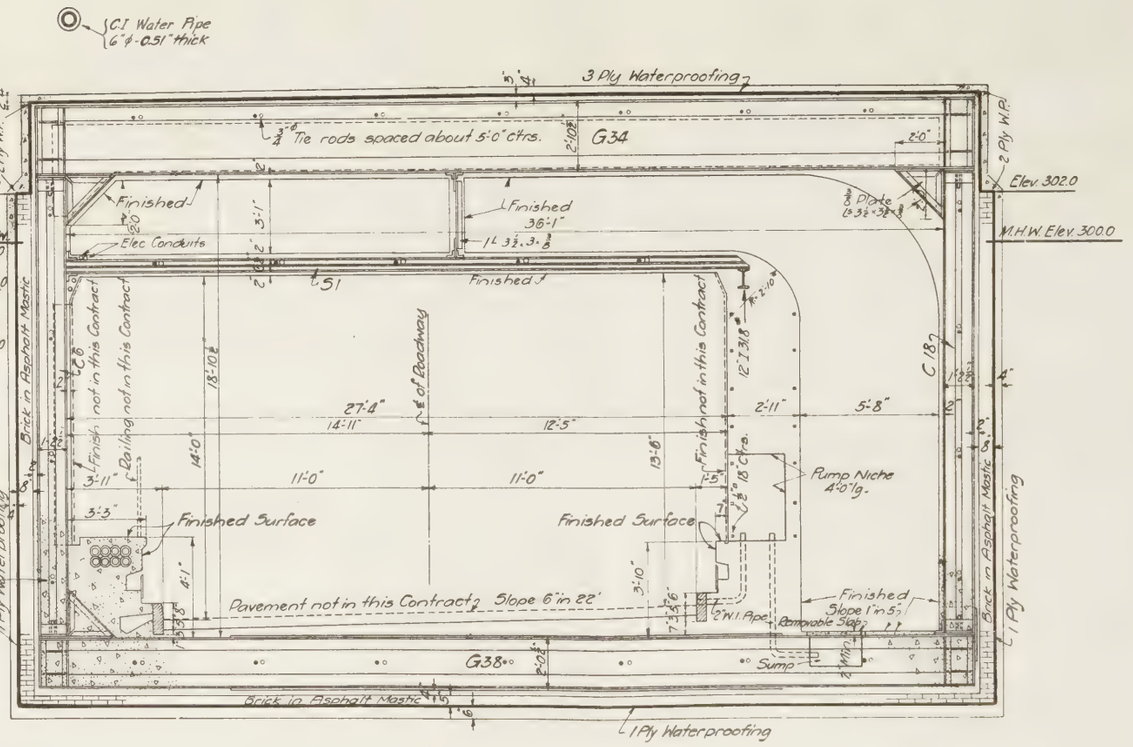
DRAWN BY C.E.J. - W.C.S.
CHECKED BY

FILE NO. 1-5

M.B. BROWN PRINTING & BINDING CO., N.Y.



CROSS SECTION H-H



CROSS SECTION G-G

For Plan & Longitudinal Section see Drwg. No. & File No. 1-5
For Interior Details " " 14 " " 1-5
For Concrete Details " Drwgs. Nos 15-16 " " 1-5
For Girder & Column Schedules " Drwg " 19 " " 1-5
For Details of 6" Water Pipe System " " 13 " " 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 12

SCALE 0 1 2 FEET

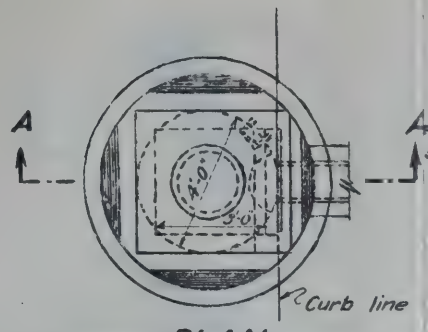
DATE APRIL 25, 1925

DRAWN BY L.C.J.
CHECKED BY D.F.B.

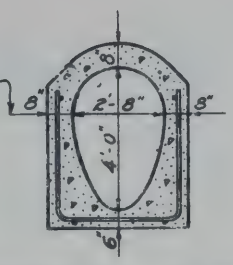
CHIEF ENGINEER

ENGINEER OF DESIGNS

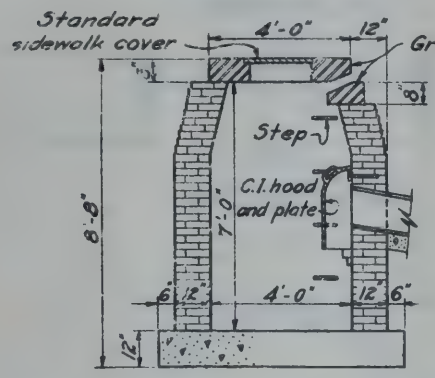
FILE NO. 1-5



PLAN



ALTERNATE SECTION
IN SPRING STREET
To be used where required
by the Engineer.

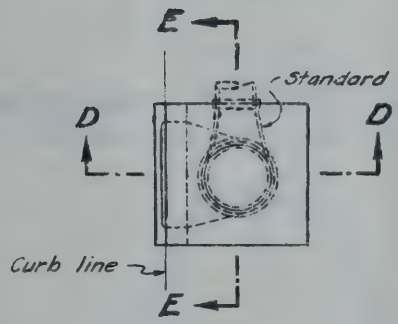


SECTION A-A

STANDARD RECEIVIN
BASIN

TIONS

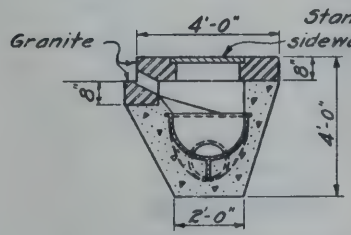
n of Sewer Construction see Drawing No.26, File No. 1-5
tails of Cast Iron for Inlets, Basins and Manholes
see Drawing No.28, File No. 1-5



PLAN

Note:-
Interior and exterior walls of basins, and exterior surfaces of manhole walls and brick sewer arches to be plastered with cement mortar ½" thick.

Continuous



SECTION D-D

STANDARD

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 27

SCALE: 0 1 2 FEET

DATE: APRIL 29, 1925

ENGINEER OF DESIGNS

CHIEF ENGINEER

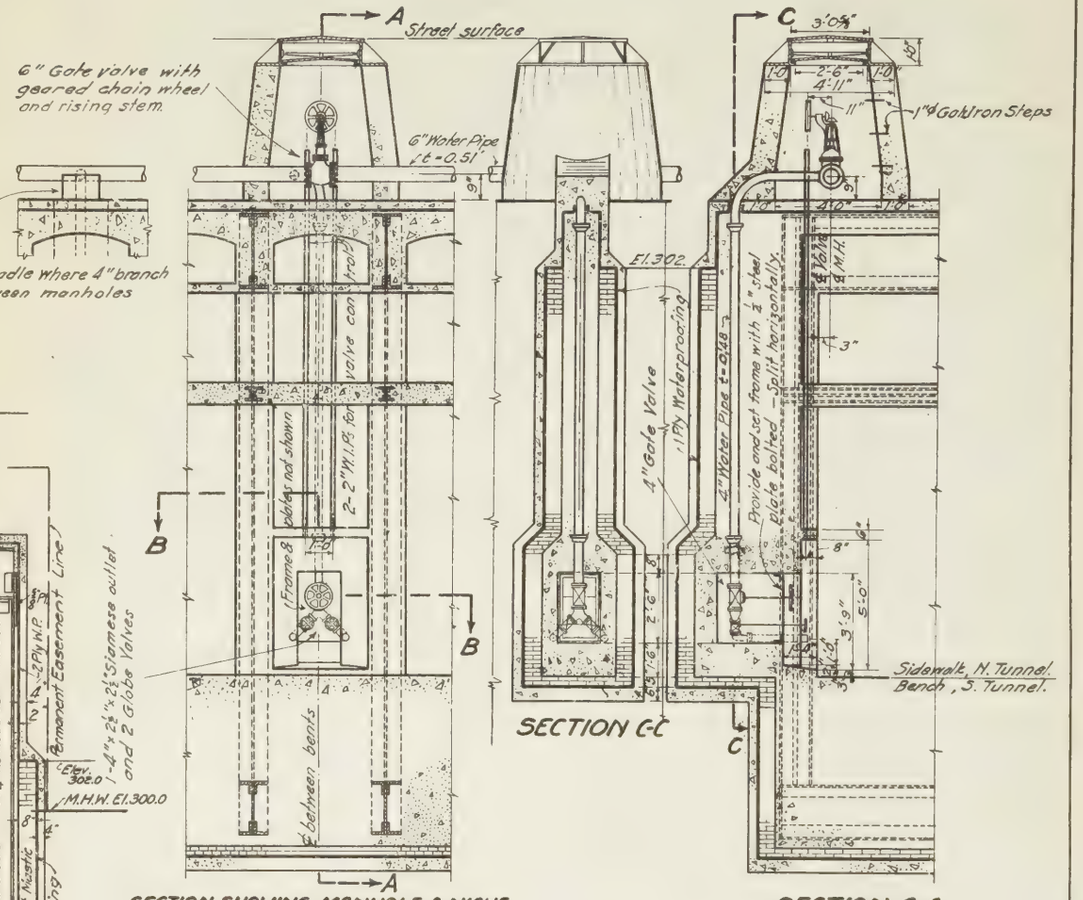
DRAWN BY C.E.J. - W.C.S.
CHECKED BY

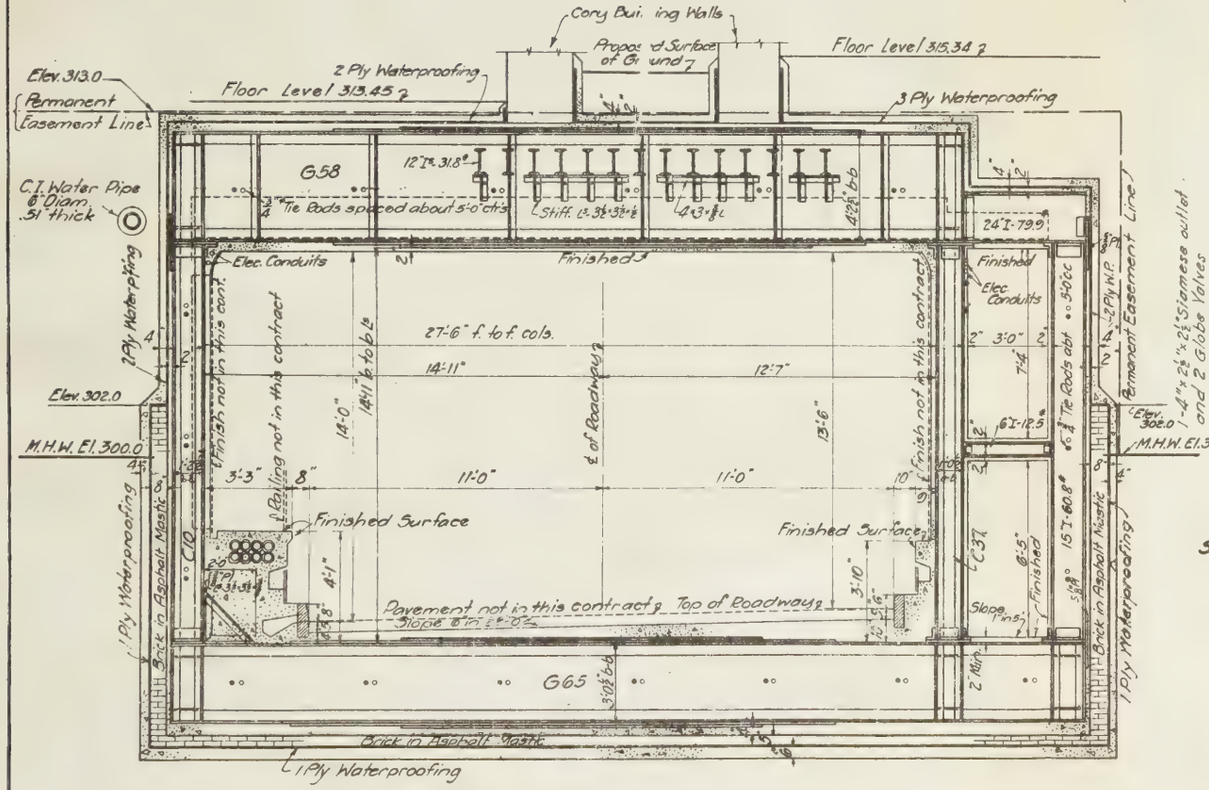
FILE NO. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.

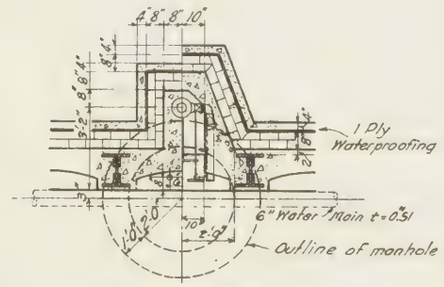
DATA FOR 6" WATER MAIN AND OUTLETS

6" C.I. Pexlands throughout and, on south side of North & South Tunnels
4" manholes with sealed head and covers spaced about 480' c-c.
6" Gate valves, rising stem, gears and chain wheels " 480' c-c.
4" C.I. Outlet pipe and fittings " 120' c-c.
4" Iron body, bronze mounted gate valves - long stem " 120' c-c.
4" x 2½" x 2½" Two-way Siamese Y's and two Globe valves " 120' c-c.
3 - ½" plates bolted to steel frame - frames spaced " 120' c-c.
2 - 2" W.I.P. chain guides spaced " 480' c-c.





CROSS SECTION I-I



SECTION B-B

For Plan & Long. Section see Drwg. No. 5 File No. 1-5
For Interior Details " " 14 " " 1-5
For Concrete Details " Drwgs. Nos. 15-16 " " 1-5
For Girder & Col. Schedules " Drwg. No. 19 " " 1-5

DETAILS OF 6" WATER PIPE SYSTEM

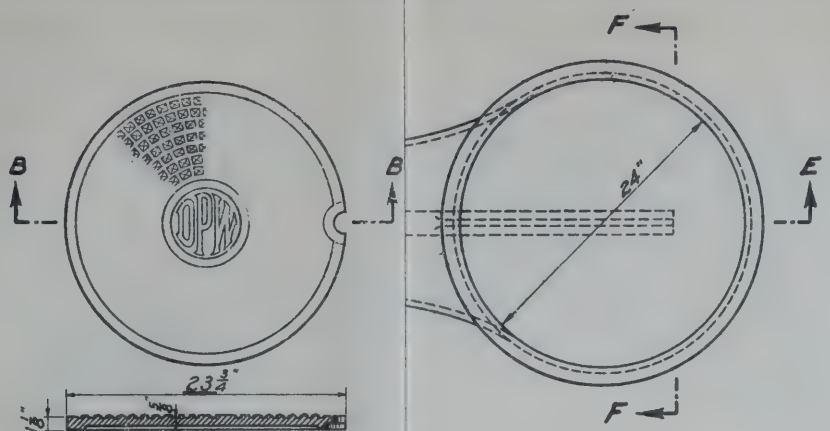
NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

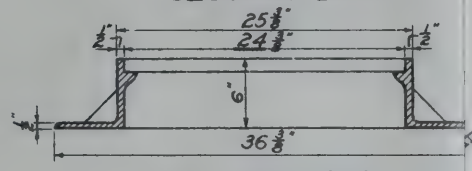
HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No 13

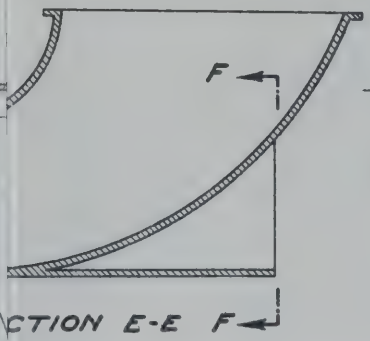
SCALE 0 1 2 FEET
DATE: APRIL 29, 1929
DRAWN BY [illegible]
CHECKED BY [illegible]
CHIEF ENGINEER
FILE No. 1-5

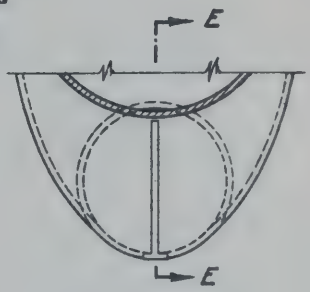
Ole Singstad
ENGINEER OF DESIGNS

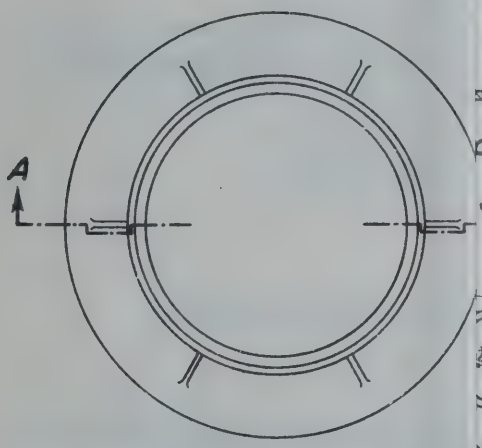
M B BROWN PRINTING & BINDING CO N Y











STANDARD BOWL

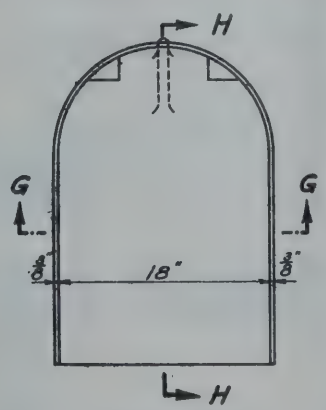
FOR INLET BASINS

STANDARD FRAME AND

FOR SIDEWALK MANHOLES AND RECEIVIN

RD WROUGHT

STEP



ELEVATION

S

SECTION G-G

STANDARD HC

FOR RECEIVI

Plan of Sewer Construction see Drawing No.26, File No.1-5
Details of Inlets, Basins and Manholes
see Drawing No.27, File No.1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL

CONTRACT No. 5
CONTRACT DRAWING No. 28

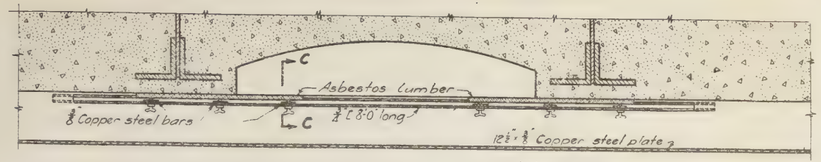
SCALE: 0 3 6 9 12 INCHES DATE: APRIL 28, 1925

Chas. Singstad
ENGINEER OF DESIGNS

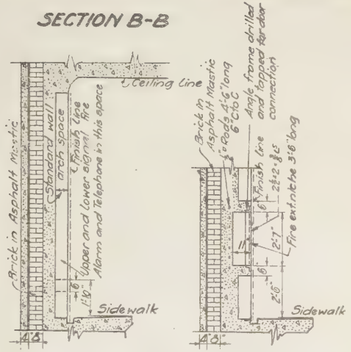
Ole Singstad
CHIEF ENGINEER

DRAWN BY C.E.J. - W.C.S.
CHECKED BY J.A.S.

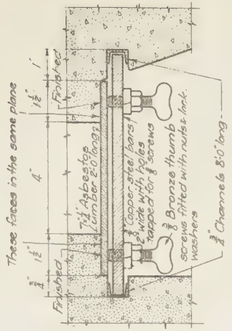
FILE NO. 1-5



SECTION B-B



TUNNEL NICHES

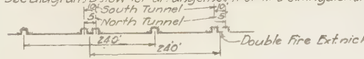

These faces in the same plane
Finished
7"x4" Asbestos Lumber 20'-0" long
⅝ Copper steel bars 12" c to c tapped to receive ⅝" screws
⅝ Bronze thumb screw fitted with nuts & lock washers
4" Channels 8'-0" long

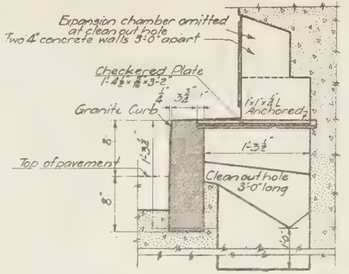
SECTION C-C

SPACING OF TUNNEL NICHES

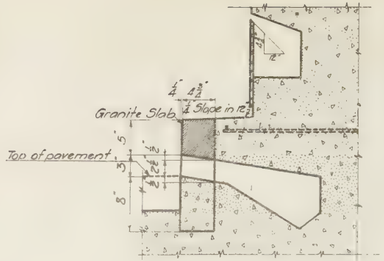
Upper Signal	spaced 200' c to c about	
Lower Signal	" 200' c to c	"
Fire Alarm	" 400' c to c	"
Telephone	" 400' c to c	"
Single Fire Extinguisher	" 240' c to c	"
Double Fire Extinguisher	" 240' c to c	"

See diagram below for arrangement of fire extinguisher niches

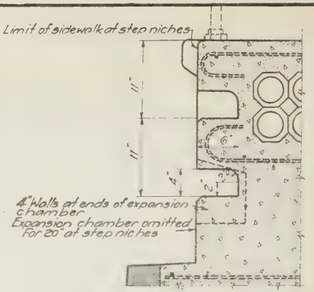



Expansion chamber omitted at clean out hole
Two 4" concrete walls 3'-0" apart
Checkered Plate
Granite Curb
1½"x1½"x¼" L Anchored
Top of pavement
Clean out hole 3'-0" long

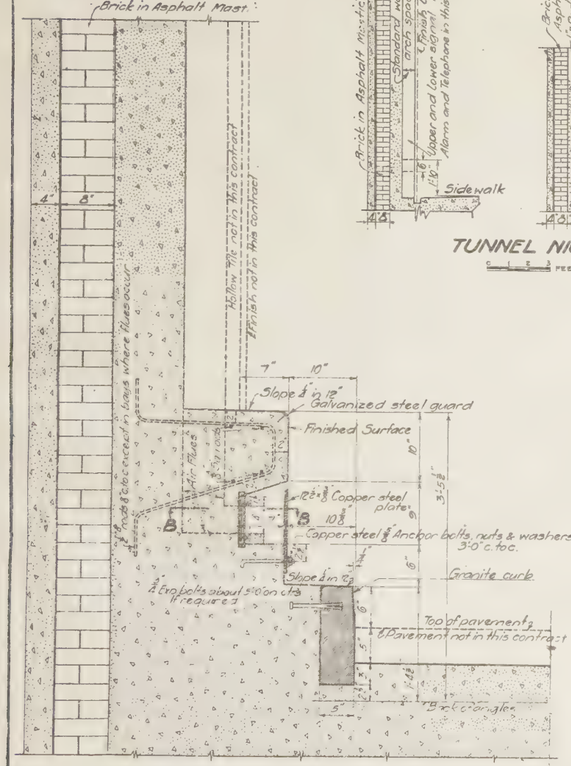
CROSS SECTION AT CLEAN OUT HOLE
South Tunnel at ℄ Sta. 99+71



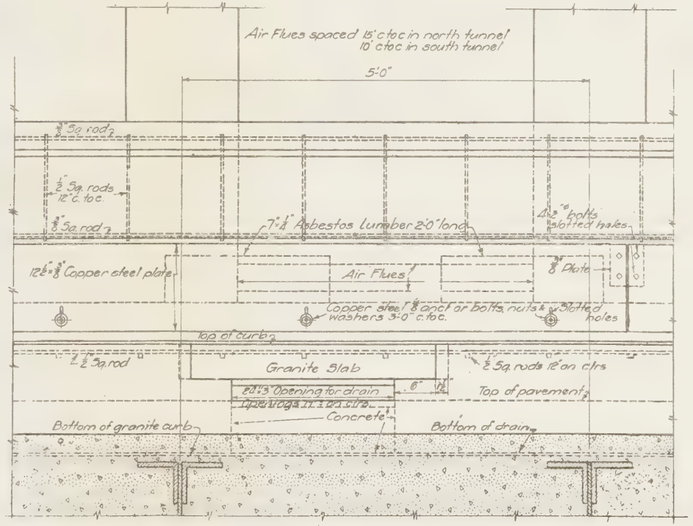
CROSS SECTION AT GUTTER INLET



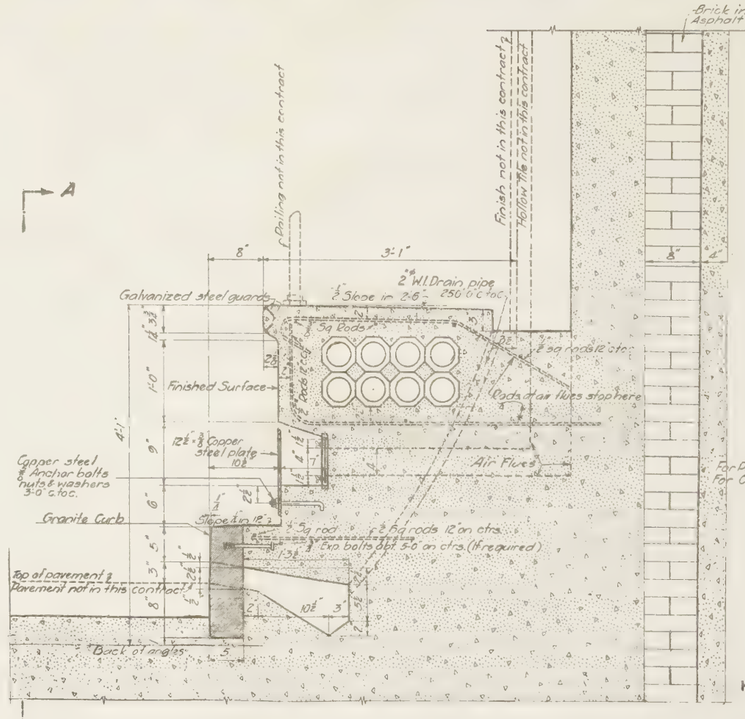
CROSS SECTION AT STEP NICHES
Step niches spaced every 240'



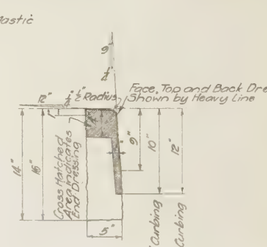
CROSS SECTION AT SIDE OPPOSITE SIDEWALK



SECTION A-A



CROSS SECTION AT SIDEWALK



CURB DRESSING

For Plans and Sections ... see drwgs No 5-13 incl File No 16
For Concrete Details ... " " " 15-16 " " "

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 3
CONTRACT DRAWING No. 14

SCALE 0 3 6 9 12 INCHES DATE APRIL 23, 1928

Chief Engineer

DRAWN BY B.G.F.K.
CHECKED BY O.F.H.

FILE NO. 1-5

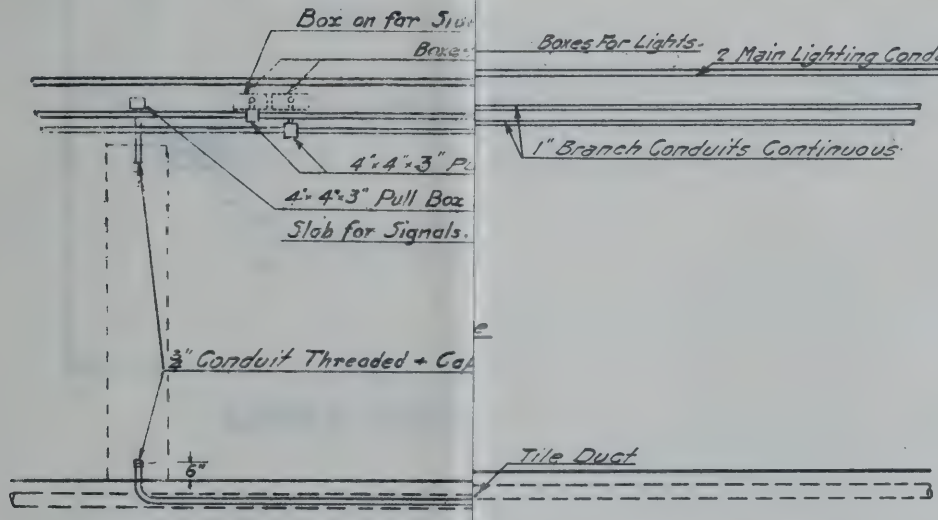
Chas. Simonds
Engineer of Design

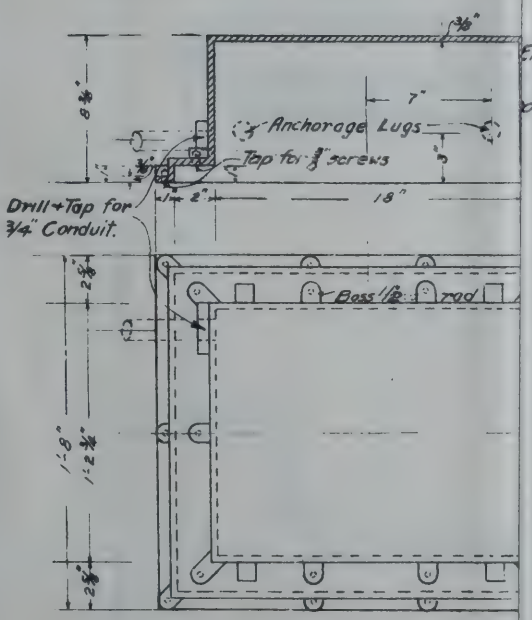
INTERIOR - DETAILS

M B BROWN PRINTING & BINDING CO. N.Y.

RTH TUNNEL		SOUTH TUNNEL	
	From Sta. To Sta.	Spacing	From Sta. To Sta.
"	84+93-90+36	20'	" 83+62-93+81
"	90+36-92+36		
"	92+36-94+43		
	From Sta. To Sta.	Size	From Sta. To Sta.
	84+03-94+43	1½ inchs	83+62-90+36

nguisher, Fire Alarm, Telephone + Signal Control See





Electrical Conduit System

ofile

DETAIL OF C.I. LIGHT BO
(Supplied without Cover)

SCALE 0 1 2 3 6 9

Ole Singstad
ENGINEER OF DESIGNS

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 29

SCALE AS INDICATED.

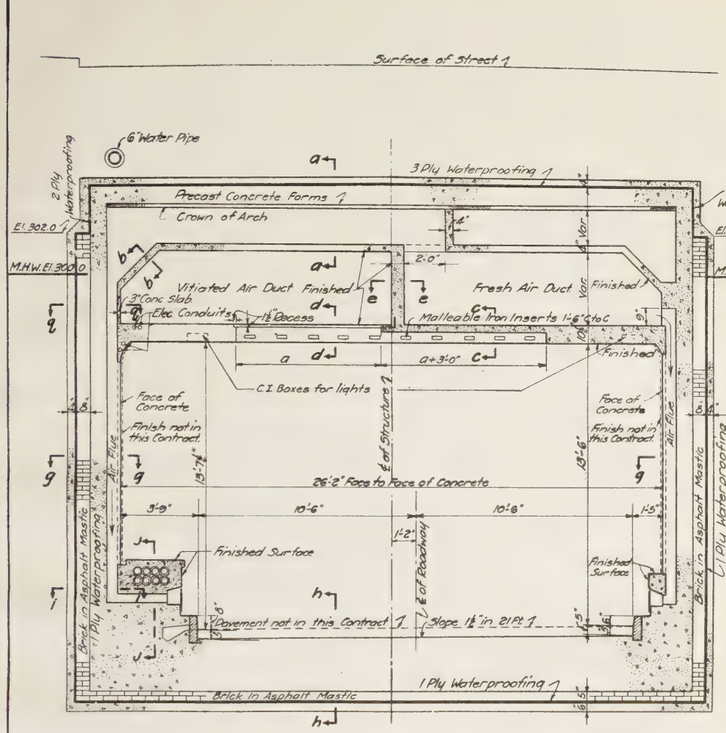
DATE APRIL 23, 1923

DRAWN BY MKC
CHECKED BY gnb.

C. M. Holland
CHIEF ENGINEER

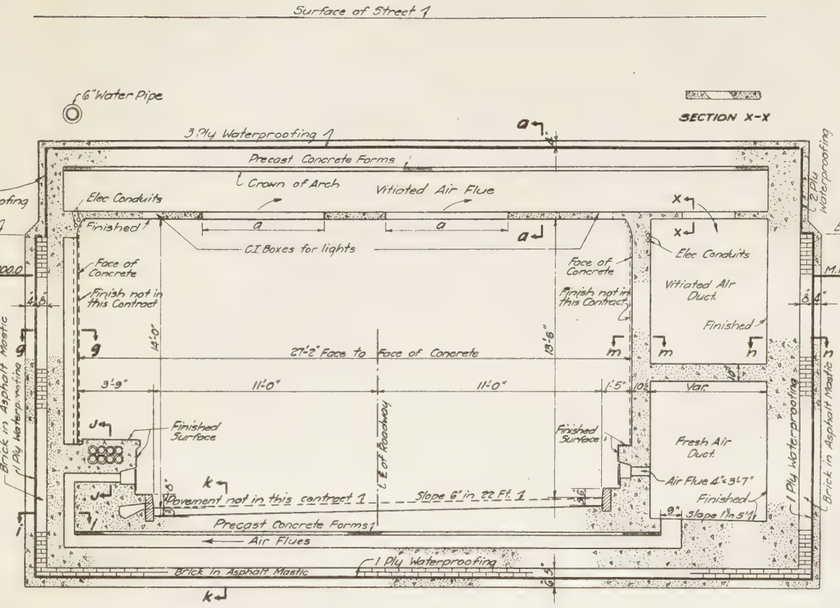
FILE NO. 1-5

M.E. BROWN PRINTING & BINDING CO. N.Y.



CROSS SECTION AIR DUCTS ON TOP

NORTH AND SOUTH TUNNELS



CROSS SECTION AIR DUCTS ON SIDE

NORTH TUNNEL

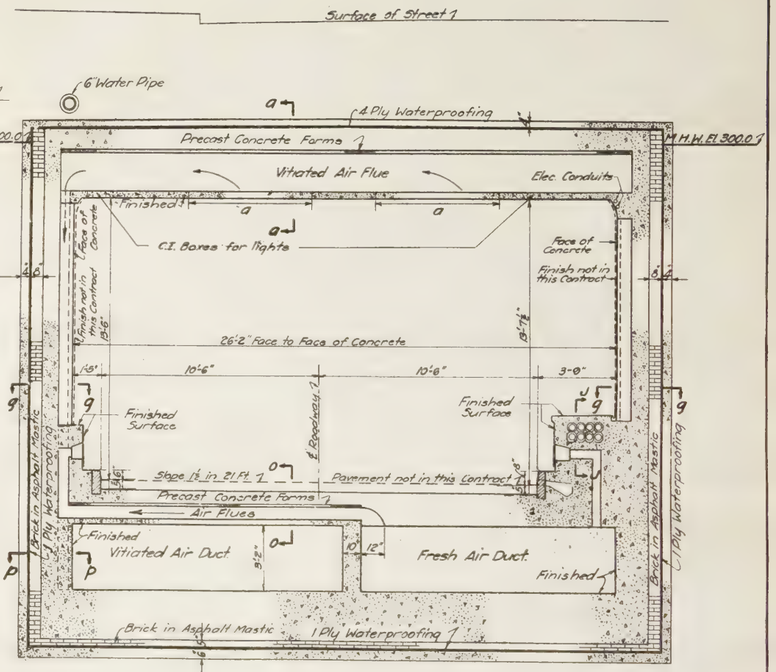
LOCATION OF C.I. BOXES (for lights)

NORTH TUNNEL			SOUTH TUNNEL		
Spacing	℄ Sta. to ℄ Sta.		Spacing	℄ Sta. to ℄ Sta.	
20' C to C	84+99	90+36	20' C to C	83+62	93+81
15' C to C	90+36	92+36			
10' C to C	92+36	96+63			

SPACING OF EXHAUST PORTS

Length of Port a in ft.	NORTH TUNNEL		SOUTH TUNNEL	
	From ℄ Sta.	To ℄ Sta.	From ℄ Sta.	To ℄ Sta.
2	84+94	86+32	83+63	85+36
3	86+32	88+50	85+36	87+96
4	88+90	91+28	87+96	90+56
6	91+28	96+63	90+56	93+81

NOTE:-
North Tunnel Air Flues & Ports Spaced 15' C to C
South " " " " " " 10' C to C



CROSS SECTION AIR DUCTS ON BOTTOM

SOUTH TUNNEL

REFERENCE NOTES

For Sections see Dwg. No. 16
File No. 1-5
For Interior Details see Dwg. No. 14
File No. 1-5

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 15

SCALE: 0 1 2 3 FEET

DATE APRIL 23, 1923

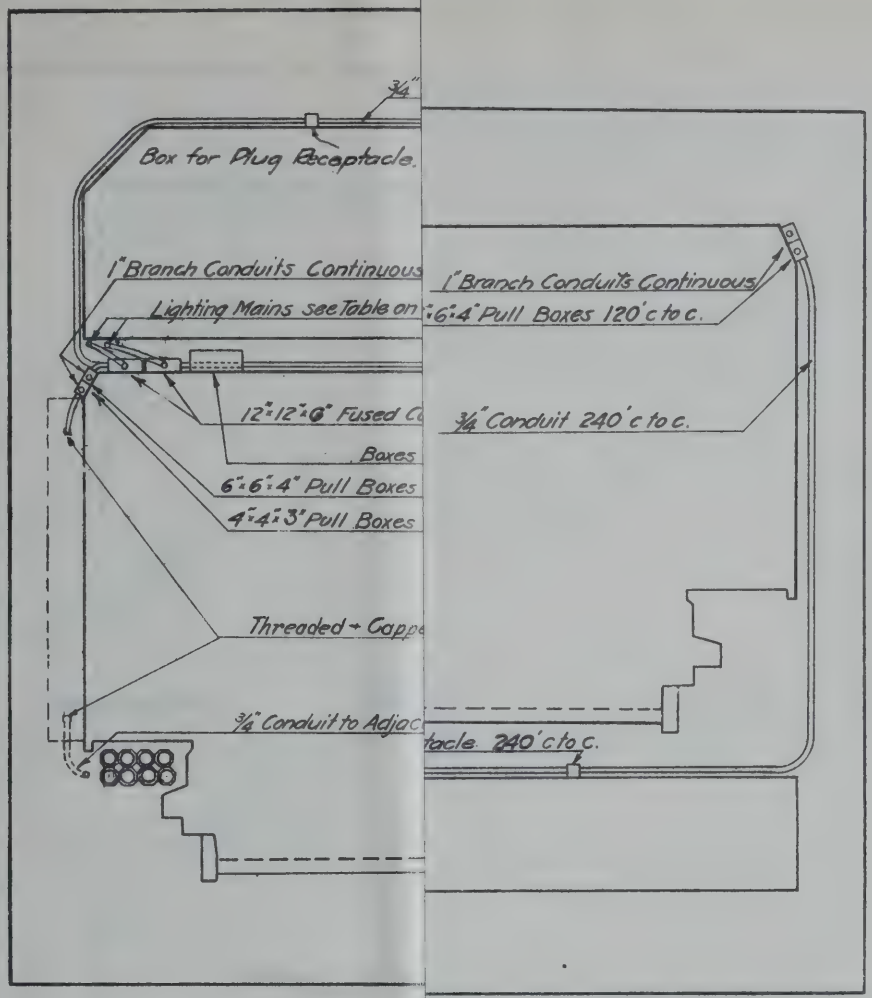
CHIEF ENGINEER

DRAWN BY J.O.T.
CHECKED BY C.S. O.H.O.

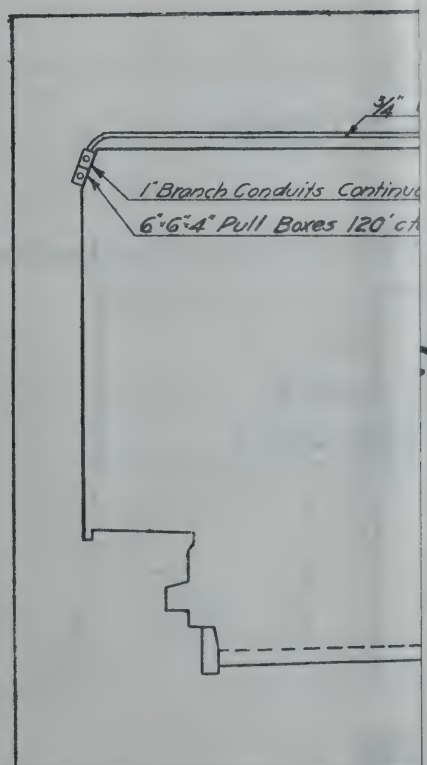
FILE NO. 1-5

CONCRETE DETAILS

Ove Ingstad
ENGINEER OF TUNNELS



CROSS SECTIONS ON BOTTOM



CONDUIT SYSTEM

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 30

SCALE: 0 1 2 3 FEET

DATE APRIL 23, 1923

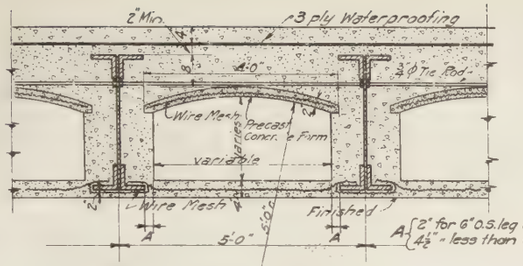
Ole Singstad
ENGINEER OF DESIGNS

CROSS SE

DRAWN BY [illegible]
CHECKED BY g. n. B.

O. H. Holland
CHIEF ENGINEER

FILE NO. 1-5



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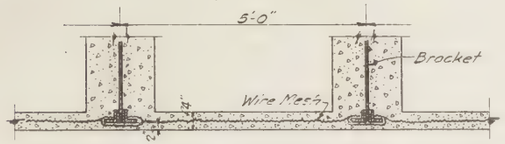

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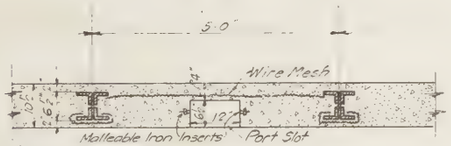

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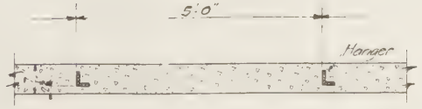
Section: "d-d"



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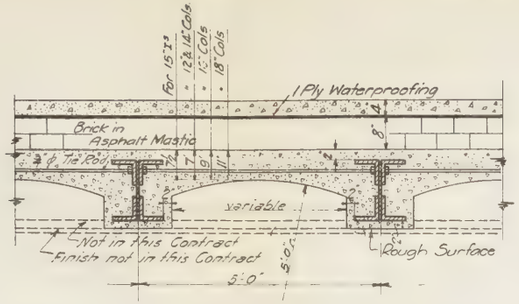

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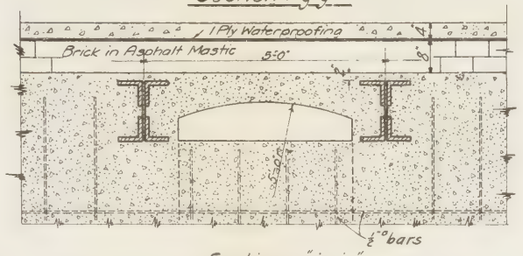

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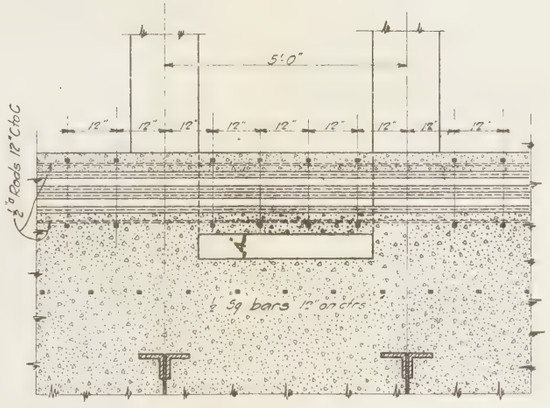

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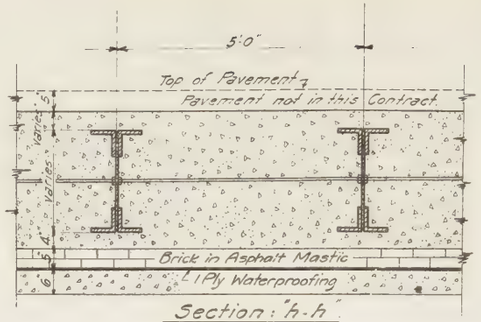

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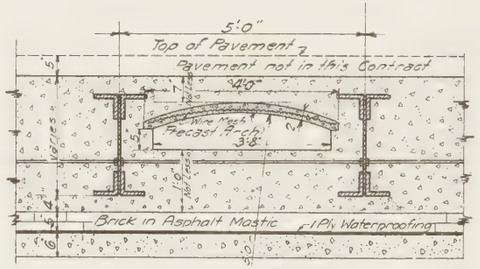

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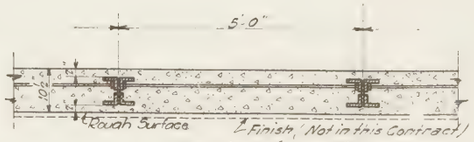

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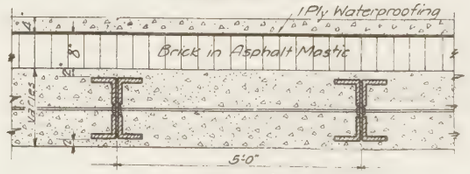

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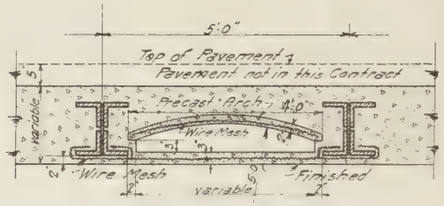

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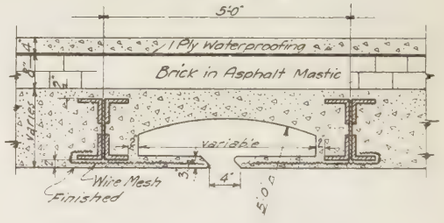

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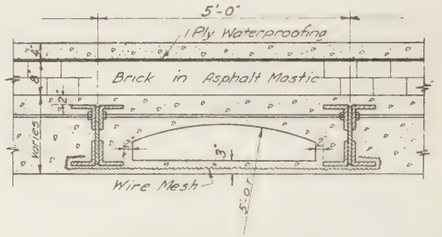

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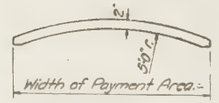


Payment Area for Precast Concrete Form.

CONCRETE DETAILS

¾" Tie rods about 5'-0" ctrs

For Locations of Sections see Drawing No. 15. File No. I-5.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 16

0 3 6 9 12 INCHES

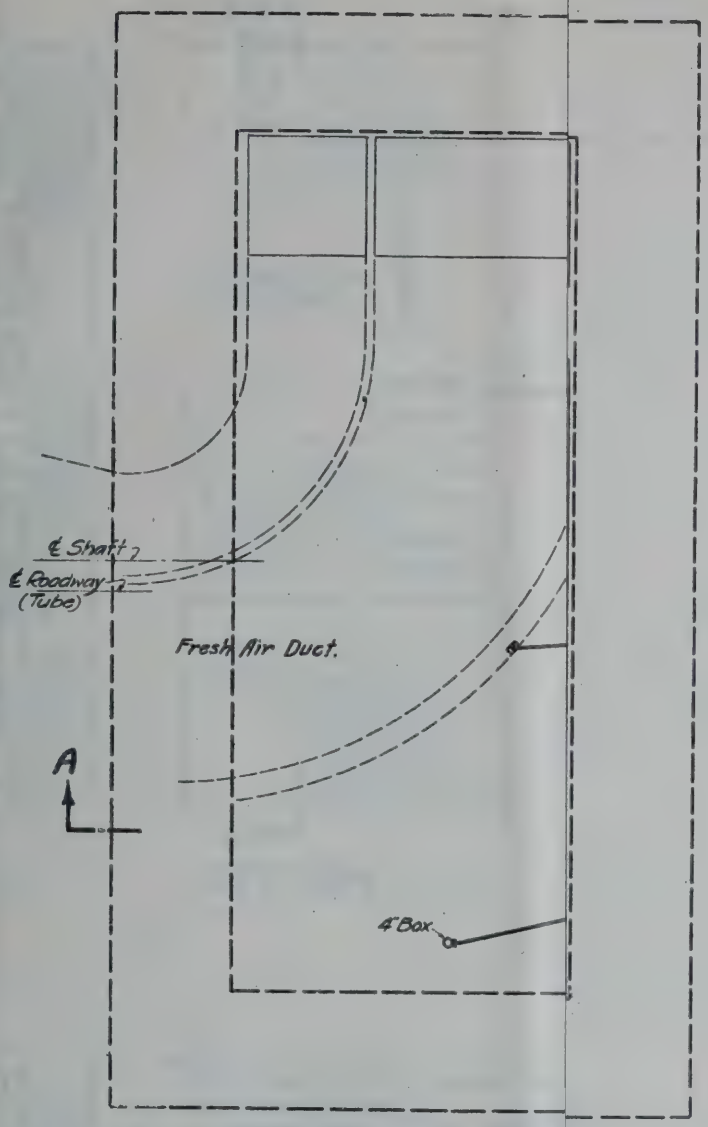
DATE: APRIL 29, 1929

Ole Singstad
ENGINEER OF DESIGNS

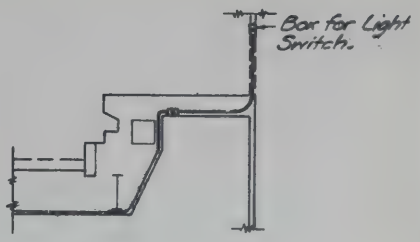
Clifford Holland
CHIEF ENGINEER

DRAWN BY: B.A.S.
CHECKED BY: L.B.J.C.

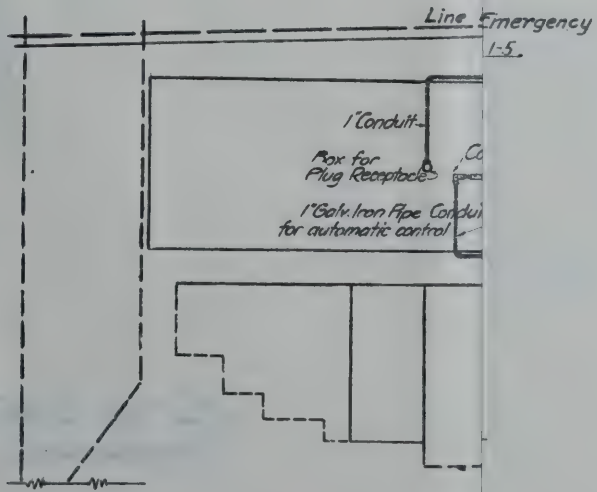
FILE NO. I-5



PLAN OF PL



SECTION a-a



SEC

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 31

SCALE: 0 1 2 3 4

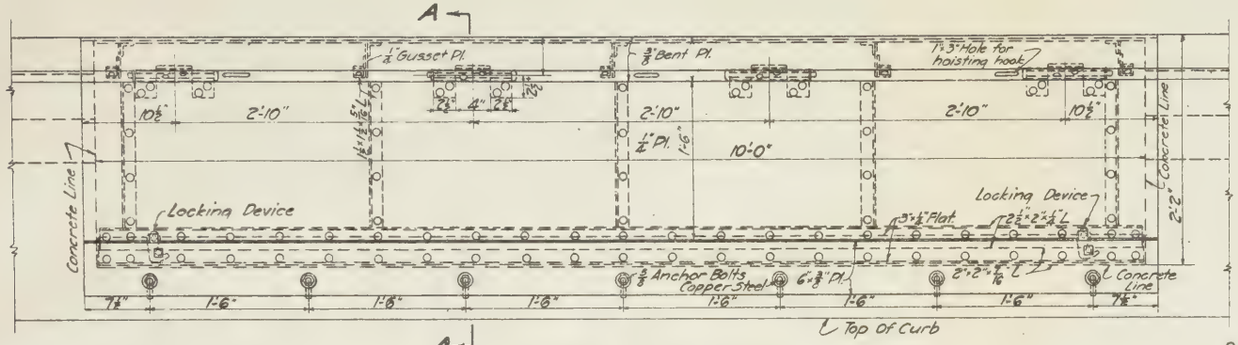
DATE APRIL 23, 1923

Ole Singstad
ENGINEER OF DESIGNS.

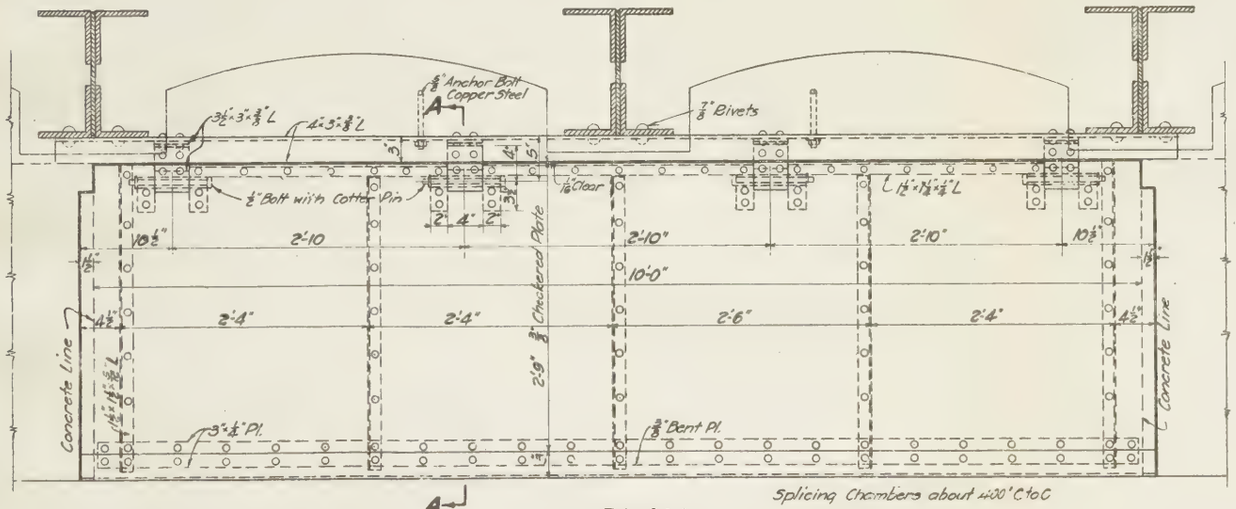
DRAWN BY L.A.F.
CHECKED BY g.n.B

Clifford Holland
CHIEF ENGINEER

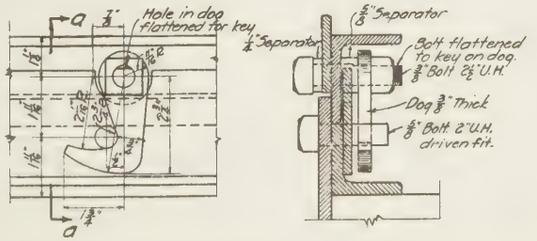
FILE No. 1-5



FRONT ELEVATION

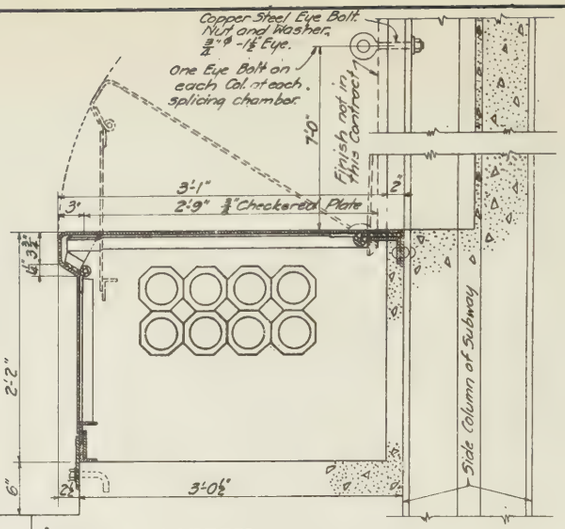


PLAN

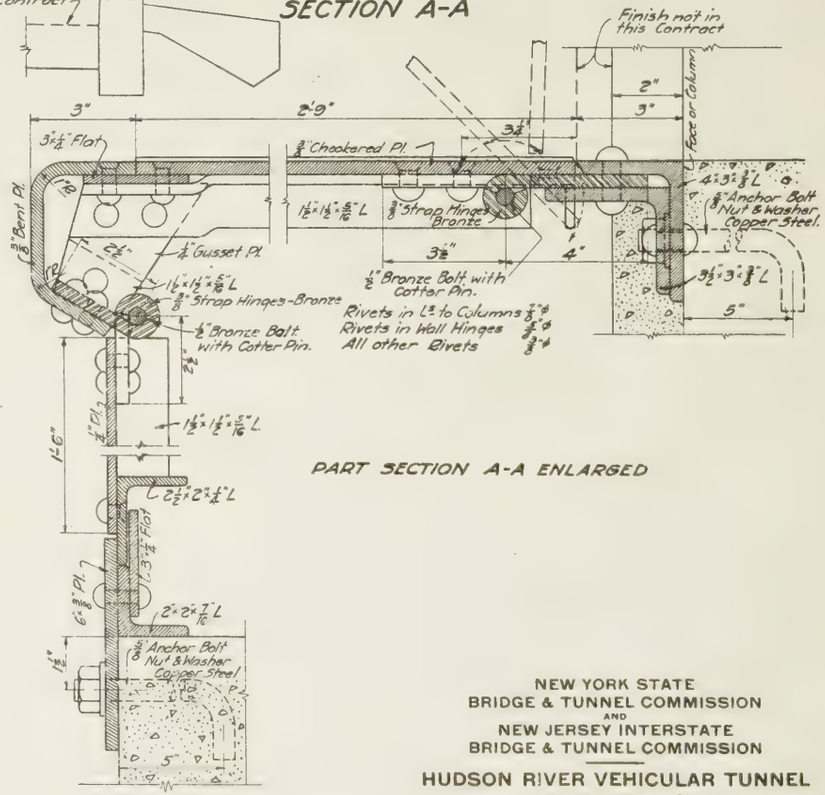


DETAIL OF LOCKING DEVICE SECTION a-a

For Plan and Sections see Dwg Nos 3 to 13 incl. File No. I-5
For Interior Details " " No. 14 File No. I-5



SECTION A-A



PART SECTION A-A ENLARGED

Ch. Ingersoll
ENGINEER OF DESIGNS

HIGH TENSION DUCT SPLICING CHAMBER

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 17

SCALE: 0 5 10 INCHES
0 1 2 INCHES
DATE: APRIL 23, 1928

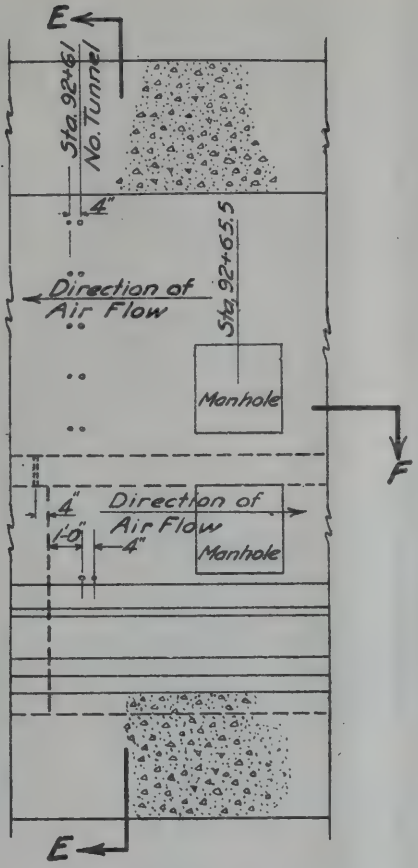
DRAWN BY O.F.B.
CHECKED BY E.A.L. O.F.B.

Allen Hollis
CHIEF ENGINEER

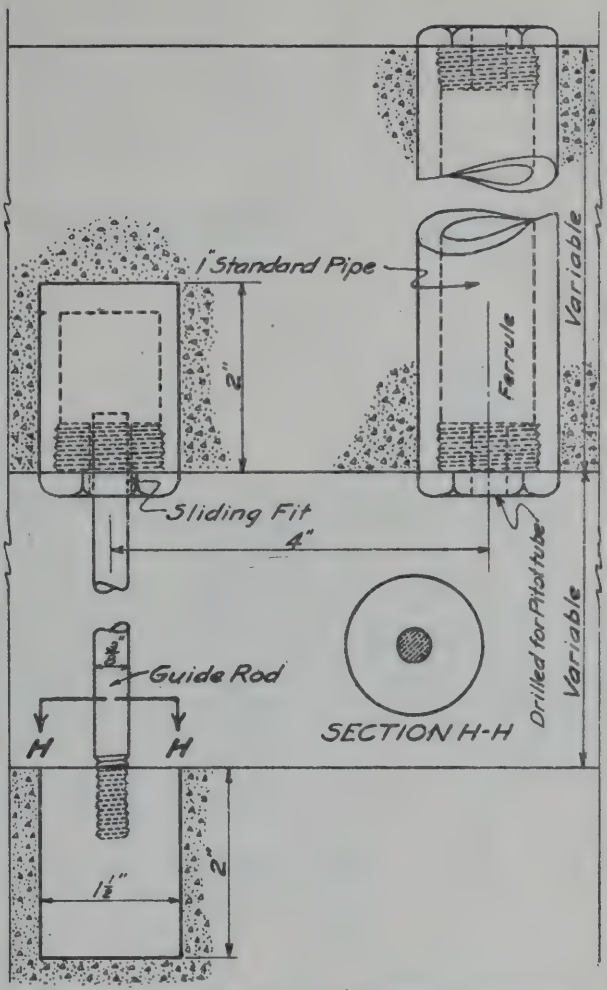
FILE No. I-5

M. E. BROWN PRINTING & BINDING CO., N.Y.

V E-E

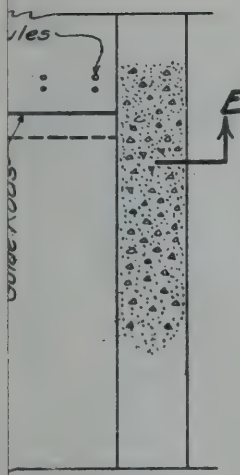


SECTION G-G



DETAILS OF GUIDE RODS AND FERRULES

Scale: 0 1 2 in.



Y F-F

Note:-
Guide rods to be furnished complete with end fittings.
All guide rods, fittings and ferrules to be of brass.
Guide rods in all cases to be 4", in the direction of air flow, from ferrules.

DETAIL AT "Z"

Scale: 1 0 1 2 3 4 5 ft.

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 32

SCALE: As shown

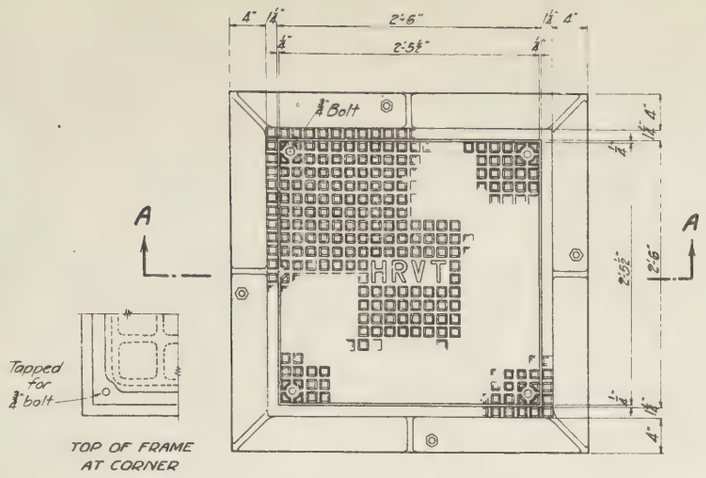
DATE: APRIL 28, 1925

CHIEF ENGINEER

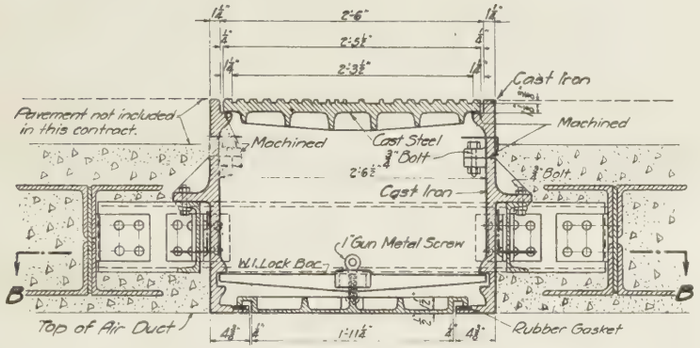
DRAWN BY
CHECKED BY

FILE NO. 1-5

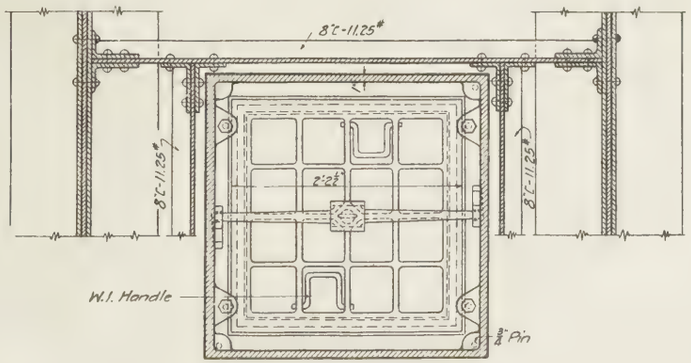
M.B. BROWN PRINTING & BINDING CO. N.Y.



PLAN



SECTION A-A



SECTION B-B

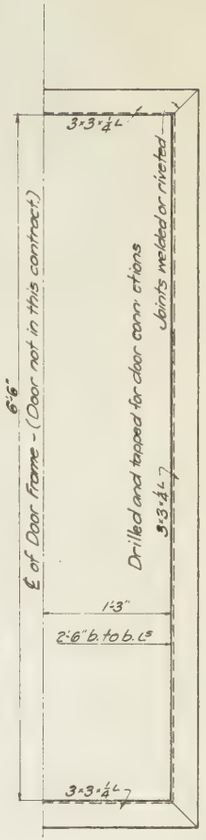
MANHOLE FRAME & COVERS

For Bottom Air Duct

2 Required at C.L. Sta. 91+33.5

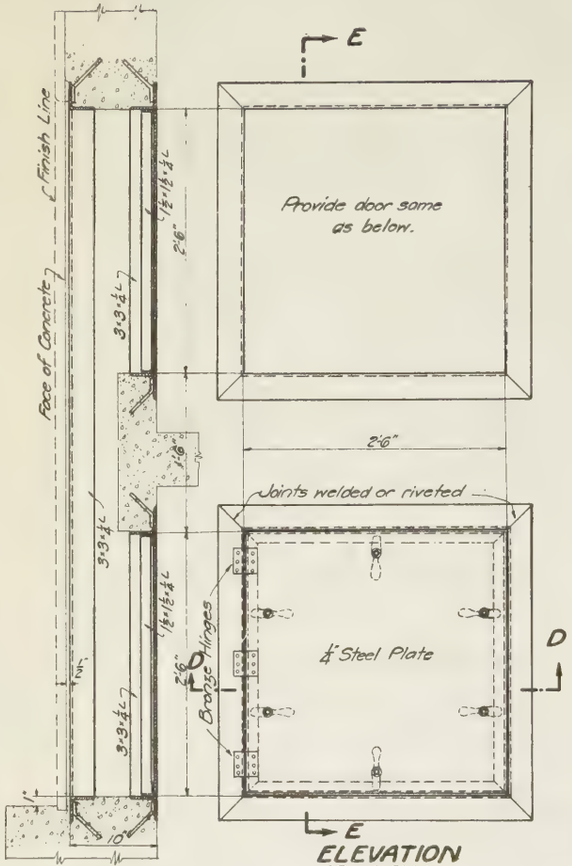
2 " " C.L. Sta. 92+63.5

Ole Singstad
ENGINEER OF DESIGNS


3"x3"x¼" L
℄ of Door Frame - (Door not in this contract)
Drilled and tapped for door connections
Joints welded or riveted
3"x3"x¼" L
1'-3"
2'-6" b. to b. L's
3"x3"x¼" L

ELEVATION

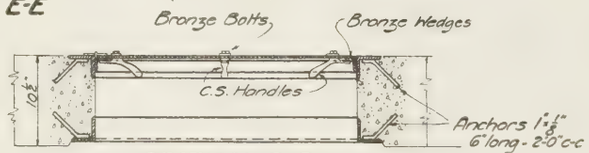
(Tunnel Side)



SECTION E-E

ELEVATION

(Duct Side)

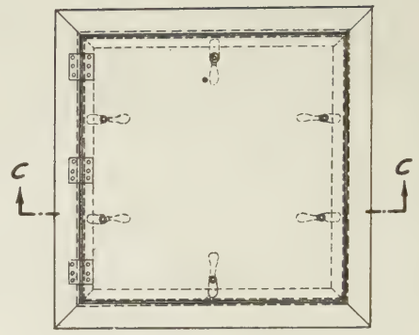


SECTION D-D

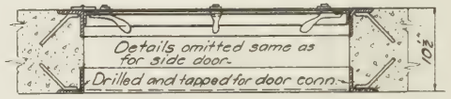
MANHOLE FRAMES & COVER

For Side Air Duct

One Set Required



PLAN



SECTION C-C

MANHOLE FRAME & COVER

For Top Air Duct.

12 Required

For Plans & Sections see Drwgs. Nos. 3-13 incl. File No. 1-5

For Interior Details " Drwg. No. 14 " " 1-5

For Concrete Details " Drwgs. Nos. 15-16 " " 1-5

For Location of Manholes " Drwg No. 32 " " 1-5

TUNNEL MANHOLES

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 18

SCALE 0 3 6

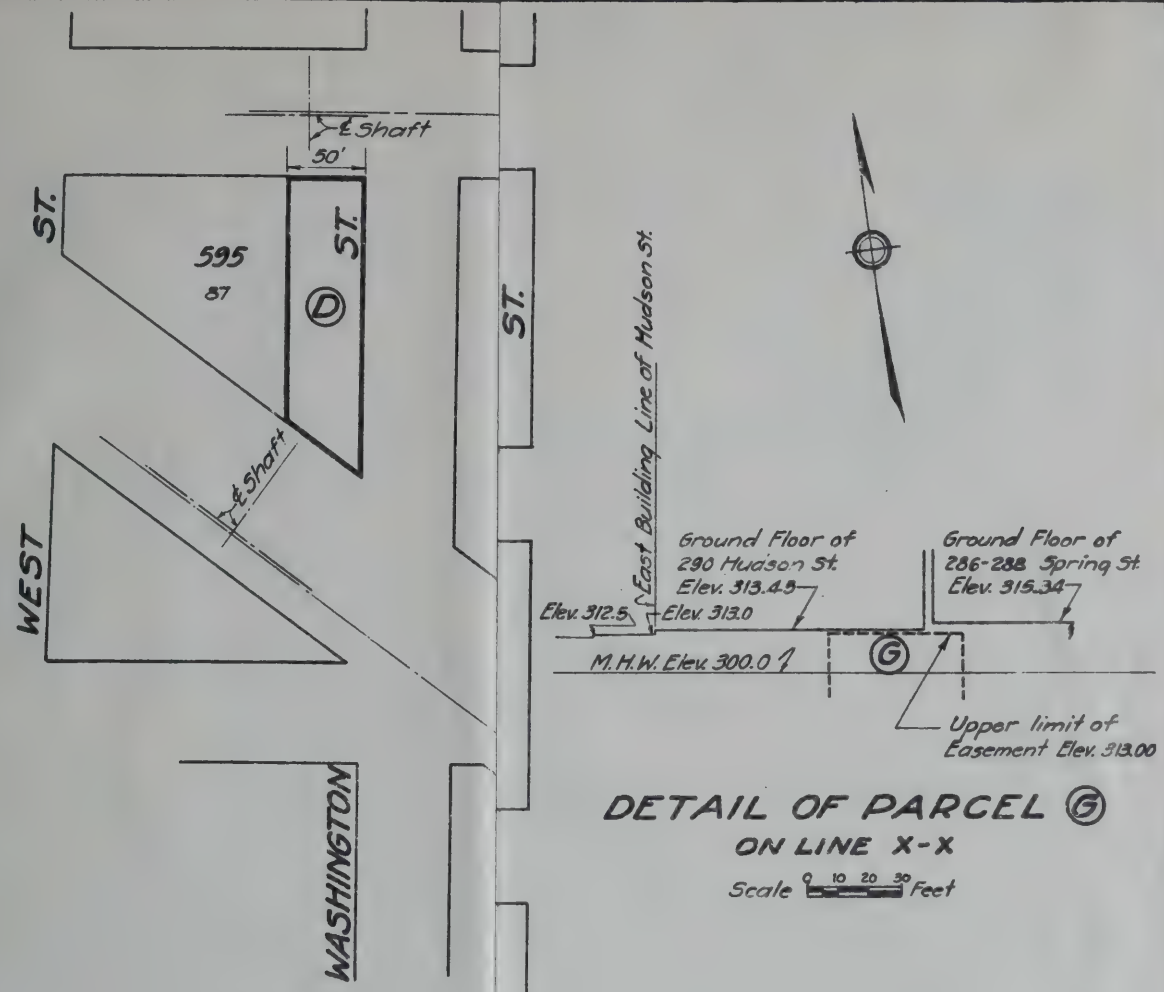
DATE: APRIL 25, 1928

DRAWN BY L.R.J.
CHECKED BY L.A.T. O.K.Q.

CHIEF ENGINEER

FILE No. 1-5

M.B. BROWN PRINTING & BINDING CO. N.Y.



DETAIL OF PARCEL (G)
ON LINE X-X

Scale 0 10 20 30 Feet

For alinement and profile of North Tunnel see Drawing No.1, File No. 1-5.
For alinement and profile of South Tunnel see Drawing No. 2, File No. 1-5.

LEGEND:

(A) Denotes area available for Cont

(B) (C) (D) (E) (F)

(G) Denotes permanent easement for Contractor's use and locati

NOTES:

221 Denotes Block Numbers
19 " Lot "
456 " Street "

Buildings on areas available for C use, and on areas availabe for Contrac location of tunnel structures, except on to be razed by the Contractor.

AR

NEW YORK STATE
BRIDGE & TUNNEL COMMISSION
AND
NEW JERSEY INTERSTATE
BRIDGE & TUNNEL COMMISSION

HUDSON RIVER VEHICULAR TUNNEL
CONTRACT No. 5
CONTRACT DRAWING No. 33

SCALE: AS SHOWN

DATE APRIL 23, 1929

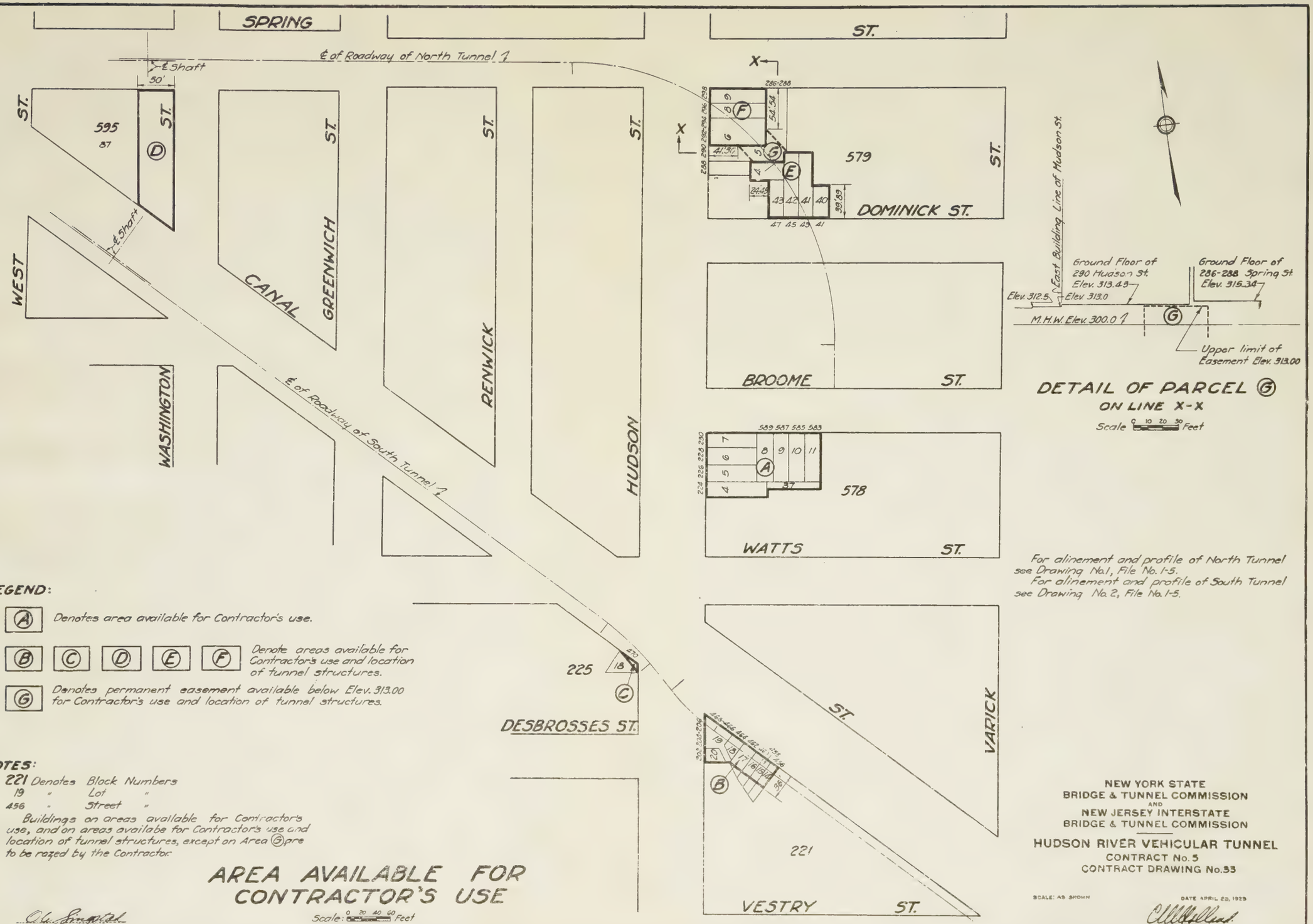
O. H. Ammann
ENGINEER OF DESIGNS

C. M. Holland
CHIEF ENGINEER

DRAWN BY O.N.-E.M.M.
CHECKED BY J.C.

FILE NO. 1-5

M. B. BROWN PRINTING & BINDING CO., N.Y.



M B BROWN PRINTING & BINDING CO.N.Y.

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